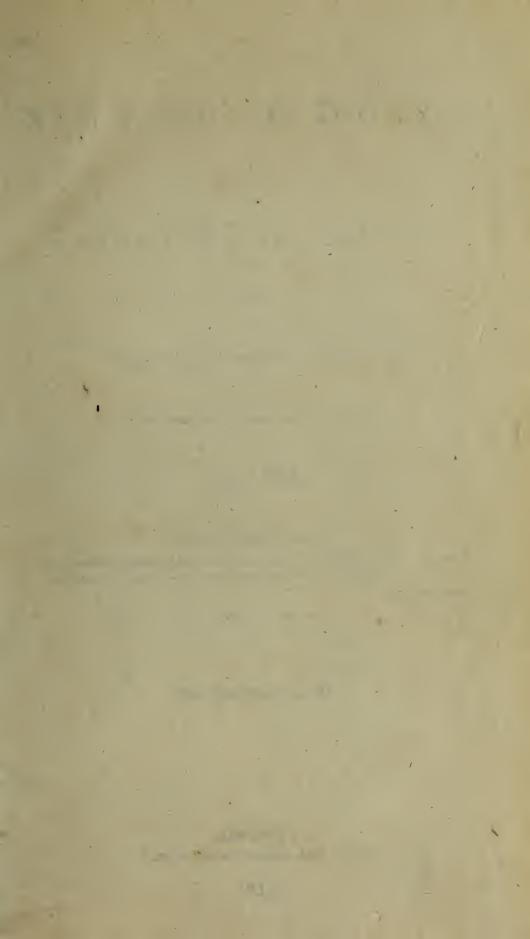
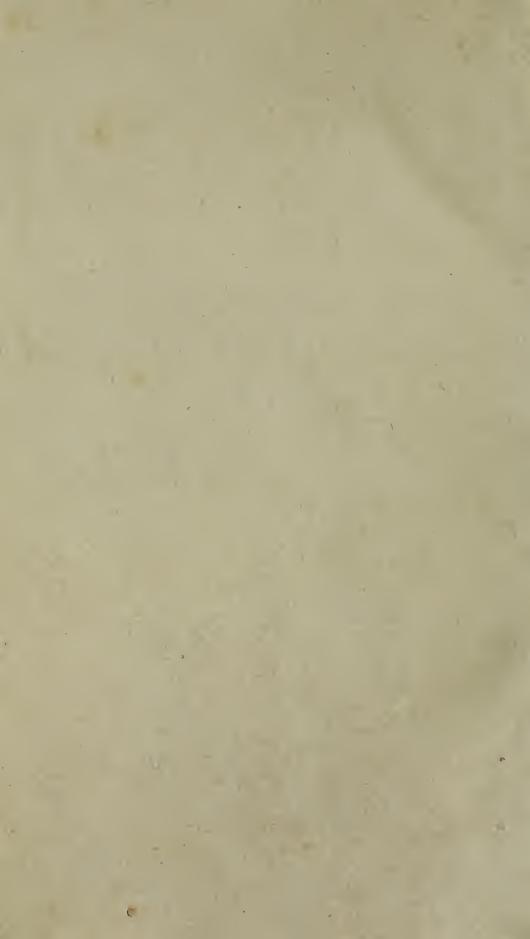


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NEW-ENGLAND JOURNAL

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MEDICINE AND SURGERY,

AND

Collateral Branches of Science.

CONDUCTED BY A NUMBER OF PHYSICIANS.

Vol. VII.

Homo naturæ minister et interpres tantum facit et intelligit, quantum de naturæ ordine, re vel mente, observaverit; nec amplius scit aut potest.

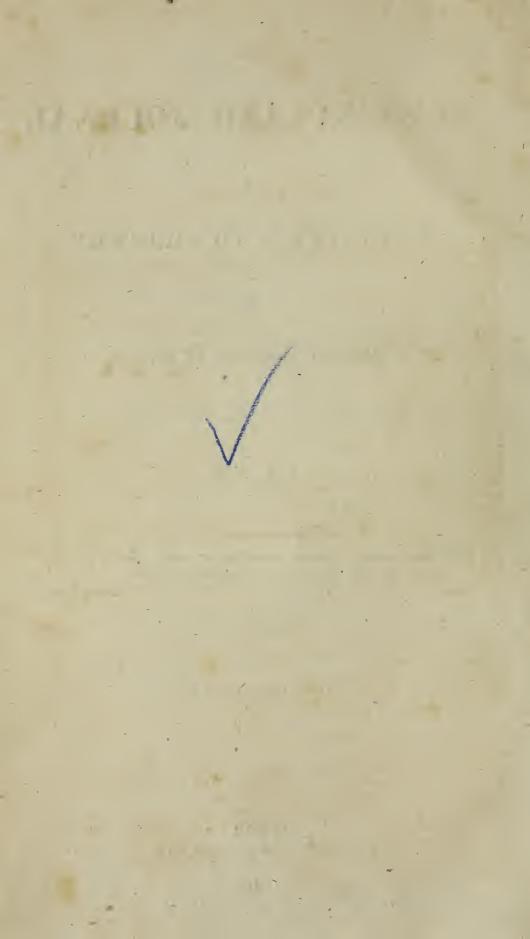
FRANCIS BACON.

NEW SERIES, Vol. II.

BOSTON:

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1818.



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The New England Journal

OF

MEDICINE AND SURGERY.

Vol. VII.

JANUARY, 1818.

No. I.

Retrospect of the progress of the Physical Sciences during the last year.

[For the New England Journal of Medicine, &c.]

NATURAL PHILOSOPHY.

IN a French publication, the Annales de Chimie et Physique, there is a curious set of experiments on the influence of the wind in the propagation of sound, by M. Delaroche. The method which he pursued was to have two drums or bells giving exactly the same sound. The experimenter was placed between them, and varied his position until both the sounds appeared the same. The distance between him and each of the sounding objects was then measured. Some of the results of these experiments are different from what would a priori be expected, and contrary to the commonly received opinions on They are as follows: 1. The wind has scarcely the subject. any influence on sound at small distances, as for instance, twenty feet. 2. When the distance is more considerable, the sound extends much less against the wind than in the direction of This difference increases in proportion to the distance. 3. Sound is heard a little better in a direction perpendicular to the wind, than it is in the direction of the wind itself. 4. Causes not connected with the wind, but depending upon the modifications of the atmosphere, have great influence on the facility with which sounds are propagated to a distance.

The mode of measuring heights of mountains and other places not easily subjected to trigonometrical observation, by computations founded on the weight of atmosphere above them,

has been the object of much attention and research. Various improvements on the barometer have from time to time been made, with a view to render it secure and portable, to increase the minuteness and accuracy of its indications, and to render precise the correspondence between the height of the mercury in the instrument, and the elevation of its situation above the level of the sea. More recently the thermometer has been applied to the same purpose, upon the principle that water boils at different temperatures in high and low situations. It is well known, that the boiling point of fluids is regulated by the pressure of the superincumbent atmosphere, so that the higher we ascend, or in other words the lower the barometer is, the less is the temperature required to boil water. Accordingly the temperature at which water boils is inversely as the barometrical pressure. In order to facilitate the reduction of this principle to practical use, Mr. Wollaston presented to the Royal Society in March last the description of a thermometer, the construction of which is so delicate as to be capable of indicating very small differences of temperature, and the variation of heights corresponding to them; for instance, the difference of temperature requisite to boil water upon a table and upon the ground. This instrument is so contrived, that the effect of expansion drives the mercury from the large bulb into a smaller one just above it. When the boiling point approaches, the mercury passes from the smaller bulb into a capillary tube of such fineness that one degree occupies about an inch in length of the tube, and the height of the mercury is read off by a properly applied vernier. The superior portableness of this instrument over the barometer will probably render it an important auxiliary to science.

Professor Moricchini of Rome, not long since published an asserted discovery, that the violet rays of the prismatic spectrum have the power of communicating the magnetic property to steel. This discovery has been doubted and contradicted in various parts of Europe. The Marquis Ridolfi, another Italian experimenter, has published a memoir in confirmation of the fact, and states that he had succeeded in perfectly magnetizing two needles, one in thirty, the other in forty-six minutes, and can now charge with the magnetic power by the same process, as many needles as he pleases. The needles thus magnetized, viz. by directing on and passing over them, for a period not less than thirty minutes, the violet rays of the spectrum, through the medium of a condensing lens, are stated to possess all the energy and properties of needles magnetized in the common way by means of the loadstone. Their homonomous

when made to vibrate on a pivot, their point turns constantly to the north and their heads to the south. A specimen of a needle magnetized in this way has been sent to London for examination.

CHEMISTRY.

Sir Humphrey Davy has been led from his experiments on explosive mixtures, to some researches into the nature of flame. He has shewn, in a satisfactory manner, that those flames which produce the greatest heat do not produce the greatest light, and vice versa. In coal gas, in the most brilliant white flame, which of course affords the most light, he has found, that the combustion of the gaseous inflammable body is not immediate and perfect; but that the gas occupying the interior of the flame is first decomposed, and deposits solid charcoal; and this charcoal is gradually ignited and burnt. When a flame is remarkably brilliant and dense, he concludes that solid matter is always produced in it; on the contrary, when a flame is feeble and transparent, it may be inferred that no solid matter is formed; yet flames which produce the greatest heat, for instance, the flames of Newman's blow pipe, are so feeble that they can hardly be seen in the day light.

Sir H. Davy has farther prosecuted his inquiries in regard to flame, with a view to ascertain the effect produced on it by rarefication. Gases he finds to be less inflammable when rarefied by means of an air pump, while, on the other hand, they are more inflammable if rarefied by heat. In regard to common air, neither its rarefication nor condensation produced much effect upon flame burning in it. In consequence of the foregoing researches, the Royal Society have awarded to Sir H. Davy the gold medal instituted by Count Rumford, to be adjudged to the author of the most important discovery on light

and heat.

The blow pipe has long been known as a useful agent in the hands of mineralogists and chemists, for producing a powerful heat and directing it on a small surface. But the common mode of using it by expiration or blowing from the mouth is trouble-some and laborious to the operator. Mr. Newman, mathematical instrument maker in London, at the suggestion of Mr. Brooke, has connected the blow pipe with a reservoir of condensed air. A moderate charge of air in this reservoir occupies a considerable time in escaping through a small orrifice, so that a steady stream or jet of air may be directed on a flame

for fifteen or twenty minutes. Professor Clarke, of Cambridge, Eng. has availed himself of this blow pipe to produce an intense heat by a current of oxygen and hydrogen gases. By condensing these gases in the reservoir, in the proportion of two volumes of hydrogen to one of oxygen, and directing the stream of this mixed gas through the flame of a spirit lamp, he has produced a temperature sufficiently high to fuse the most refractory substances. The results of his experiments have occupied a conspicuous place in most of the scientific journals for the past year. He found that the intense heat produced by this blow pipe was sufficient to melt every substance subjected to its action, with the single exception of charcoal. All the most refractory stones and minerals, such as rock crystal, flint, calcedony, jasper, sapphire, topaz, corundum, chalk, &c.; also the earths, viz. lime, barytes, strontian, magnesia, alumina, and silica, were melted into glass, slag, or enamel. But the most unexpected result was the reduction of barytes and strontian into their metallic bases. The metals thus obtained were white, had a silvery lustre and a specific gravity exceeding four.* As mixtures of oxygen and hydrogen when ignited are liable to explosion, and as this accident actually occurred to Dr. Clarke, so as to destroy the apparatus and endanger the operator, he has contrived a variety of successive modes of producing security against this accident. These consist in passing the gas through water, through wire gauze, and lastly by placing a strong screen or partition between the reservoir and the operator. The experiments of Dr. Clarke would entitle him to greater praise, if they could boast the merit of originality. But it is a fact well known in this country, that the application of oxygen and hydrogen to the blow pipe was more than fourteen years ago put in use by Mr. Robert Hare, Jun. of Philadelphia. This gentleman, by confining the gases under hydrostatic pressure in separate reservoirs, and mixing the current from them at the point of their ignition, found, from many experiments, that an intense heat might be produced, and the most refractory metals and earths reduced to a state of fusion. A great number of experiments with this blow pipe were made by Mr. Hare and Professor Silliman, and their results published in the memoirs of the Connecticut Academy of Arts and Sciences. These results were nearly as numerous, and in many respects as novel and interesting as those of Professor

^{*} This experiment has since been repeated at the laboratory of the Royal Institution without the production of either of the above metals, and some fallacy has been suspected in Dr. Clarke's trials.

Clarke, many of them being precisely of the same kind. The apparatus used was on the same principle, only in Dr. Clarke's, the gases were mixed in the reservoir, while in Mr. Hare's they were kept in separate reservoirs, and mixed at the point of combustion. In Dr. Clarke's also the stream was produced by the condensing syringe, and in Mr. Hare's by hydrostatic pressure. On the whole, Dr. Clarke appears entitled to but little of the credit of originality, or of the merit of a discoverer. The principle of burning these gases by the blow pipe belongs to Mr. Hare, the idea of condensing them in a reservoir was suggested by Mr. Brooks, while the various methods of security from explosion were derived from Sir H. Davy and Professor Cumming. Our countryman Mr. Hare has vindicated his right to the original discovery by a publication in the Philosophical Magazine in London, for August last. He has there republished an account of the different experiments made by Professor Silliman and himself.

A curious and important paper on solution has been published by Mr. Daniel in the beginning of the last year in the Journal of the Royal Institution, which promises to throw much light on the structure of solid bodies. If a lump of alum, of borax, or of nitre be immersed in a vessel of water and left entirely at rest for some weeks, the solution of the lump will be found to have gone on unequally, the uppermost portion will be found most wasted, and the undermost portion least, so that the undissolved portion of the mass will have assumed a conical The lower part of these bodies after this treatment will be found embossed over with numerous crystalline forms. Those in alum are octahedrons, the proper figure of the crystals of that substance, those in borax are eight sided prisms, and Mr. Daniel has shewn in a satisfactory way that these embossments are not formed by the crystallization of that portion of the salt which has been dissolved, but that they are brought into view by the mode of solution in the mass subjected to the action of water, this solution taking place according to the natural forms of crystallization of the substance. it follows that nearly all those apparently amorphous masses are in reality composed of crystals, though such a structure cannot always be distinguished by the eye previous to this natural dissection. The same crystalline structure was developed, when carbonate of lime, carbonate of strontian, and carbonate of barytes were slowly acted on by vinegar. Bismuth, antimony, and nickel, treated with very dilute nitric acid exhibited also a crystalline structure. From these experiments it may be inferred, with considerable probability, that the structure of most bodies is in reality crystallized, even when they appear amorphous, or without particular regularity of form.

6

Professor Prevost has published in the Bibliotheque des Sciences, &c. at Geneva, some considerations on the nature of the causes which maintain the proportion between the oxygen and the azote of the atmosphere. This interesting subject has long been a source of perplexity to philosophers. The oxygen, it is well known, is continually consuming by the process of combustion, the vegetation of plants and the respiration of animals, while the azote remains comparatively undiminished. Notwithstanding this unequal consumption, the atmosphere remains unchanged, and the proportion of its constituent parts remains the same, at whatever height or situation it is examined. has on this account been a prevailing opinion, that some process is going forward in nature, by which oxygen is disengaged from its combinations in sufficient quantities to supply the loss which continually takes place from its consumption. Priestley believed that this supply was afforded by vegetables, which give out oxygen from their leaves in the day time. But Mr. Ellis and some later experimenters have shewn, that the quantity of oxygen which plants give out is not equal to that which they consume, so that vegetables as well as animals tend to deteriorate the air. So that no perfectly satisfactory process has yet been pointed out, by which the purity of the atmosphere is preserved.

Professor Prevost has published an ingenious calculation, in which he has endeavoured to estimate by approximation, the whole amount of oxygen which is consumed in a year, by all the natural processes which affect its combinations. The result of this calculation is, that the whole amount lost in one hundred years is so small in proportion to the whole, that supposing none of it to be restored, the loss could not be detected by any means This computation founded upon various approximate data, makes the whole weight of the atmosphere to be equal to 3986 cubic leagues of mercury,; and by considering the proportions of oxygen and azote in volumes in the atmosphere, their relative specific gravity, and the weight of oxygen in the atmosphere in reference to that of azote, (which is 23,77) he obtains for the absolute weight of all the oxygen in the atmosphere a number equal to about 900 cubic leagues of mercury. He computes that a thousand million men inhabit the surface of the earth, every one of whom consumes daily two pounds of oxygen. The rest of the animal and vegetable creation, together with the processes of combustion and fermentation, he supposes to consume three times the quantity that is

taken by men; so that the whole amount of oxygen consumed on the surface of the globe by the natural processes that are going forward, may be estimated at three hundred thousand millions of pounds in a hundred years. This weight is less than one eighth of a cubic league of mercury. So that the whole portion consumed in a hundred years, will be less than one twelve hundredth part of the whole, a diminution which it would be impossible to detect by the closest methods of obser-

vation at present known.

Dr. John Davy, in a voyage from England to Ceylon has instituted a series of observations upon the temperature and specific gravity of the sea, and upon the temperature of the air over the sea in tropical regions. The temperature of the air was marked by him every two hours, both by night and by day. The sea water when drawn up was tried by means of a thermometer to ascertain its temperature, and then weighed in a weighing bottle capable of containing about three hundred grains. The general result of his observations is, that the specific gravity of the sea water is nearly the same every where, and not as had formerly been represented, different in every zone. In a single case he found the specific gravity diminished after a heavy rain. It was generally altered by squally weather. The temperature of the air was generally highest exactly at noon, and lowest just at sunrise; but in a perfect calm, the temperature of the air was the same as on land, viz. its greatest height was sometime after noon, owing to the accumulation of heat.

The facility of producing a low temperature by quickening the evaporation of fluids in vacuo, with substances calculated to absorb the exhaled moisture, has been very much increased by the discovery of Professor Leslie, that this quality resides in a high degree in porphyritic trap, when grossly pounded and moderately roasted. He found that in this state it will "absorb the fiftieth part of its weight of moisture before its absorbing power is diminished one half, and the twenty-fifth part of its weight before this power is reduced to one fourth. When completely saturated with humidity, it may hold near a fifth part of its whole weight." He found from actual experiment, by putting a quantity of this powder into a saucer seven inches wide, placing about an inch and a half over it a shallow cup of porous earthen ware three inches in diameter, filled with water, and covering the whole with a lower receiver, that when the air was exhausted from the receiver until the gauge stood at $\frac{2}{10}$ of an inch, the water in a few minutes was converted into ice. Garden mould, when roasted, produces nearly the same

effect, and "is capable of freezing more than the sixth part of its weight of water." Professor Leslie proposes to institute a series of experiments on this subject with different compound earths.*

Mr. Benedict Prevost has thrown out some new ideas regarding the cause of colour in bodies. He conceives as erroneous the ordinary opinion, that when light falls upon an opaque body, which appears coloured to our eye, red for example, the colour is owing to all the rays which compose the white rays being absorbed by the body, except the red, which are reflected; and, from a number of ingenious observations and experiments, the concludes, that the rays of light passing from an opaque body, and by their impression on our eyes enabling us to assume that it is coloured, are not reflected, but radiated; and, with certain modifications or exceptions, the same is true of transparent bodies. When light, he observes, falls upon any body, part of the rays are reflected unaltered; but the remainder penetrate more or less into the interior of the body, where certain of the rays are retained, owing to their affinity for its substance, while the others are radiated, diverging from every point of its surface and constitute its colours—red for copper, yellow for gold, &c. If the rays which constitute the peculiar colour of any body were really reflected from its surface, the very oblique rays of this colour would be much more numerous than the perpendicular or little inclined rays, and images seen obliquely in mirrors would appear more coloured than those seen perpendicularly; which is not the fact.

When a piece of gold is illuminated by white light, a part penetrates, is decomposed, and all the rays retained, except the yellow, which are radiated; but when the yellow rays are isolated and fall upon gold, they do not penetrate the surface, but are reflected in the strict meaning of the term: thus the image of a piece of gold, seen in a mirror of gold, has a much

deeper tint than the object itself.

"A plate of polished gold illuminated by the light of day, radiates, as has been already stated, the yellow rays, and reflects the white; but when the whole are received upon a second plate of the same metal, equally polished, the yellow light will be reflected by it: a part of the white will be decomposed, and furnish, by radiating, new yellow light, which, joined to the first, will augment its intensity, so that the image of the first plate given by the second will appear much deeper;" and so

^{*} Annals of Philosophy, vol. ix. p. 412. † Vide Annales de Chimie et Physique, tome iv. p. 192.

on, by multiplying the reflections, we at length obtain a very deep orange-red tint, which is probably the real colour of gold; for the natural colour of the metal is rendered paler by the white rays with which it mixed. It is on this account that a well polished deep copper vessel exhibits a richer tone of colour in the inside than on the out—that a coloured velvet appears of a deeper colour than a silk of the same colour: and M. Prevost is of opinion that the shining of the eyes of cats and of other

animals depends partly on the same cause.*

Galvanism.—From a series of experiments on the effects of temperature on the galvanic action, M. Dessaignes has been led to form the following conclusions.† 1. That metals, the temperature of which is equal throughout, lose their electromotive property when that is very much raised or lowered.

2. In heating a homogenous body unequally, it acquires the power of exciting a prepared frog, in the same manner as two heterogenous bodies.

3. The electro-motive property of a metallic combination, for example zinc and silver, may be destroyed by heating the zinc only to a certain point, or by cooling the silver.

4. When the voltaic pile is exposed to a cold of 18°, or to a heat of 100°, all its effects cease, provided the temperature is uniform throughout its extent.

METALS AND EARTHS .- We have very little to notice re-

garding these substances.

Platinum.—Mr. I. T. Cooper has ascertained several new facts regarding this metal. He obtained a hydrate of the metal, and calculating the equivalent of an atom of platinum to be 22.164, this hydrate must contain two atoms of the metal and one of water. It is unaltered by heat, until at the point of ignition, when it becomes incandescent and its particles approximate considerably; and in this state it may be hammered into a solid

† Vide Journal de Physique, 1816; and Annales de Chimie et de Physi-

que, t. iii. p. 418.

^{*} Some particulars connected with this curious physiological fact, are thus described by M. Prevost. When a cat looks at a person seated near a table, on which a lighted candle is placed, so that the eyes of the animal, being in the shade, are illuminated by the light reflected from the surrounding objects, its eyes appear to the person like little fire brands; but they cease to produce this effect if the person's hand be placed between the flame and the objects, which, from their situation, reflect their light upon the eyes of the cat. They shine again as soon as the hand is withdrawn. Should the observer be dressed in black, and have a white towel on his knee, the eyes of the cat will shine more brilliantly if the towel be folded up. The dilatation of the pupil of the cat's eyes, when in an obscure place, exposes a larger portion than is usually uncovered of the bottom of the eye.

bar.* Sir H. Davy has succeeded in forming a fulminating compound with platinum, by converting sulphuret of platinum into sulphate of platinum by nitrous acid; then adding ammonia in slight excess to the aqueous solution of this sulphate, boiling the precipitate formed in caustic potash, and after it is washed, drying it at 212°. It consists of platinum, 73.5; oxygen, 8.73; and ammonia with water, 17.50; in one hundred parts. It explodes when heated to 400°.†

Copper.—Dr. Meissner has detected this metal in the ashes

of a great number of plants.‡

Potassium.—The obtaining this metal with facility, is an object of some importance in a philosophical point of view. It can be effected by adding to one end of the curved gun-barrel usually employed, a tube of glass descending into an open vessel of mercury; which, by the pressure of the atmosphere, tends to maintain a pressure within equal to that of the atmosphere. An ounce of it was procured with this apparatus from four ounces of potash, by a French gentleman, at the laboratory of

the Royal Institution. §

Thorina.—This name has been given to a new earth discovered by Berzelius in the gadolinite of Kararvet; and again found by him in analyzing the deuto-fluate of cerium, and the double fluate of cerium and yttria of Finbo. It has a great analogy with Zirconia, but differs from it in crystallizing easily with sulphuric acid; in its precipitate from a muriatic solution, being bulky, semi-transparent, and gelatinous; instead of heavy, white, and opaque. In the citrates of it yielding a precipitate when the liquid is boiled; in being thrown down from its solution in sulphuric acid by oxalate of ammonia; and in the sulphates and muriates in solution not being precipitated by sulphate of potash.

Acids.—It is impossible to fix any limit to the increase of the acids, at least of such as have a ternary basis; every new combination of the elements, carbon, hydrogen, and oxygen, giving rise to new substances which possess acid properties, and display different affinities from the already known acids. In pursuing his investigations on flame, Sir H. Davy observed the formation of a new acid body during the combustion of

^{*} Journal of Science, &c. vol. iii. p. 119.

‡ Schweigger, vol. xvii. p. 340 and 436. He detects it by boiling the ashes after they have been well washed in hydro-chloric acid; then nearly saturating the solution with ammonia, so as to leave a very small excess of acid, and placing in it a plate of polished iron or zinc. In a few days the copper appears on the iron or zinc, if the ashes contained any of it.

[§] Philosophical Magazine, vol. xlix. p. 72. Mannals af Philosophy, vol. ix. p. 452.

ether. Mr. Faraday has continued the inquiry; and, according to him, oxygen, hydrogen, and charcoal may be considered as the elements of this acid, the charcoal appearing to be in very great proportion. "The peculiar character of this acid is the pungent irritating effect it produces on the eyes and nostrils; resembling that occasioned by the oxalic acid.*

Boric Acid.—One part of this acid in a crystallized state, and four parts of acidulous tartrate of potash, form a compound which dissolves readily in three quarters of its weight of cold water, and in one half that quantity of boiling water. The mineral acids decompose it very imperfectly; but it is not at all affected by tartaric acid. M. Vogel, who has examined this compound, affirms, that no union takes place between the boric and the tartaric acids; for if equal parts of these two acids be mixed together and moistened with a little cold water, almost the whole of the tartaric acid is dissolved, while the boric remains untouched: and if boiling water be employed, the boric acid entirely separates on cooling. He regards it as a chemical combination of 0.80 of tartar, and 0.20 of boric acid.†

Succinic Acid.—Some years since Gehlen announced that he had discovered the presence of this acid in a decoction of amber. Bouillon la Grange, conceiving it would be interesting to verify this statement, instituted a series of experiments on the subject, which enabled him to conclude, that amber contains a free acid which dissolves with it in alcohol, but which cannot be separated from it by water; although it is possible that it might be obtained, by passing steam through melted

amber, softened by a fat oil at the boiling point. ‡

ETHER.—M. Deslauriers has deduced the following results from a variety of experiments made by him on the preparation of sulphuric ether. § 1°. That two parts of alcohol at 38° are necessary for exhausting one part of acid at 66°, which is then diluted with one fourth of water; 2°. that the acid thus exhausted is no longer fit for producing ether, and that it, besides, retains a fourth part of ether in intimate union; 3°. that the time of discontinuing to add the alcohol, is when the products mark only 45°; 4°. and that the operation should be stopped as soon as a little water appears in the products, forming two layers in the receiver; for, beyond this point, the ether which is obtained is not free from sweet oil, a circumstance which

^{*} Vide Journal of Science and the Arts, vol. iii. p. 77.

[†] Vide Journal de Pharmacie, vol. iii. p. 7. ‡ Journal de Pharmacie, vol. iii. p. 97.

[§] Journal de Pharmacie, &c. Nov. 1816, p. 481.

ought to be avoided; 5°. that this oil is never produced by the immediate decomposition of the alcohol, but always after this has been reduced by the action of the acid on the elements of the ether; 6°. thence the residue of the retort is composed of 12 parts of acid, 3 of ether, and 3 of water, when the process has been continued to, and stopped at, the proper

periods.

Oils.—M. Colin, in prosecuting some experiments on the fabrication of hard soaps,* ascertained that the simultaneous action of the air and aqueous vapour carries off the smell of oils, and whitens them. It also divides them into two parts; one of which very readily saponifies, whilst the other is scarcely capable of that process; but for this purpose it is requisite that the oils be previously treated with sulphuric acid, or be exposed to a very low temperature. He also found that the fluid part of oils may be obtained in a pure state by a careful saponification.

Soap.—M. Colin has confirmed the opinion that water is absolutely necessary in the formation of soaps; for even lime

will not combine with oils without that intermedium.

VEGETABLE CHEMISTRY.

From the progress of this branch of chemical science, much may be anticipated, although little has been done within the period our Report embraces.

Rice.—M. Henri Braconnet has completed an analysis of this grain.‡ The following is the result of his experiments on

the variety cultivated in Carolina, and that in Piedmont.

Carolina Rice.	Piedmont Rice.
Water 5.00 grammes.	7.00 gram.
Starch 85.07	83.80
Parenchyma 4.80	4.80
Vegeto-animal matter 3.60	3.60
Incrystallizable sugar 0.29	0.05
Guinmy matter, having some affinity to starch 0.71	0.10
Oil 0.13	0.25
Phosphate of lime 0.40	0.40
100.00	100.00

^{*} Annales de Chimie, &c. tome iii. p. 22. † Annales de Chimie, &c. tome iii. p. 23.

Annales de Chimie et de Physique, vol. iv. p. 470.

The presence of muriate of potash, phosphate of potash, acetic acid, a vegetable salt with a basis of lime, another with a basis of potash, and sulphur, were also indicated; but in unappreciable quantities.

This result does not strictly agree with that of Vogel, contained in an essay read in March last to the Royal Academy of Munich, on the Cerealia; in which the following are the

principal results of his experiments:

1°. The flour of common wheat, triticum hybernum, is composed of Fecula...... 6·8

sed of Fecula	6.8
Gluten	
Saccharine gum	
Vegetable albumen	
That of triticum spelta, contains,	
Fecula	74
Gluten, (undried)*	
Saccharine gum	
Vegetable albumen	•50
20. Oat flour contains,	
Fecula	59
Albumen	
Gum	
Sugar and bitter principle	
Fat oil	2
Fibrous matter	
30. Rice flour yields,	
Fecula	98
Sugar	
Fat oil	
Albumen	

Potatoe.—Owing to the very extensive employment of the potatoe as an article of food, its nutritive qualities have been overrated. According to a recent analysis of Cadet de Vaux, 100 lbs. contain:

Amylaceous fecula	16 lbs.
Parynchyma	9
Water of vegetation	75

100+

Opium.—M. Sertürner conceives that he has discovered the principle that constitutes the characteristic constituent of opium, in a saline substance which he extracted from it, and to

^{*} In drying the albumen, 9.50 of the product should be deducted. † Journal de Pearmacie, vol. iii. p. 34.

which he has given the name of morphium.* By pouring into an infusion of opium, made with water acidulated with acetic acid, ammonia in excess, morphium is immediately precipitated, coloured with extractive matter, from which, however, it can be cleared by agitating it with a little alcohol. When pure it is colourless, sparingly soluble in boiling water, but very soluble in alcohol and ether, melting in a gentle heat, and assuming the appearance of melted sulphur; but crystallizing as it cools. It burns easily; and when heated in close vessels, leaves a solid resinous black matter, having a peculiar smell. The solution is bitter, gives a brown colour to turmeric paper, and restores the hue of litmus paper reddened with vinegar. Morphium crystallized from its solution is obtained in form of an acute four-sided pyramid, the base of which is either a square or a right angle. It readily combines with the different acids, forming a new set of neutral salts. The subcarbonate is crystallizable, but more soluble than morphium. bonate crystallizes in short prisms: the acetate in very soluble soft prisms; the sulphate in a shape like twigs of trees, and is very soluble; and the muriate assumes a plumose aspect, and is less soluble than any of the other salts; but by evaporating the solution too far, a shining, silvery, white plumose saline mass is obtained. Nitrate of morphium is in prisms, grouped as if proceeding from a centre. The tartrate also crystallizes in prisms. Morphium acts with great energy, and even violence, on the animal economy, in doses of one half grain to adults.

Sertürner supposes that the salt which Derosne regarded

as the narcotic principle is a meconiatet of morphium.

In the province of the arts connected with chemistry, some discoveries, which promise utility, have taken place during the last year. One of these is the conversion of fæcula, or the substance of flour and corn, into sugar. It is well known, that flour of wheat, rye, barley, &c. consist of two distinct chemical substances. One of these is the fæcula, or white powder, which constitutes starch; the other, the gluten, a ductile tenacious mass. At the time of the germination, or sprouting of the grains, or seeds of corn, a spontaneous change takes place, by which the fæcula is converted into sugar. This phenomenon is exemplified in the common process of making malt, in which the grains of barley acquire a sweet taste and undergo a change of their constituents into sugar. Mr. Kir-

^{*} Annals of Philosophy, vol. ix. p. 485. † Vide Repository, vol. viii. p. 29.

choff, sometime ago, discovered that this spontaneous process may be imitated by art, and that sugar may be produced from flour by means of acids, particularly the sulphuric acid. He has lately discovered that if a mixture of fæcula and of gluten, obtained from different substances, be infused in hot water for a certain time, the fæcula is converted into sugar. This discovery, which has not yet been pursued, may prove to be

of great utility in the manufacture of sugar.

During the latter part of the government of Buonaparte in France, owing to commercial restrictions and embarrassments, the article of sugar became scarce in that country, and difficult to be obtained. To remedy this evil, manufactories were established for the purpose of making sugar from the roots of beets. M. Chaptal who was himself a successful manufacturer of this sugar, has published an account of the process by which it is made. The details of this process are long, but the principal steps consist in pressing out the juice of the beets, which is then reduced by boiling, to the thickness necessary for crystallization. The sugar deposits in crystals, which have the appearance and character of those from the sugar cane.

ANIMAL CHEMISTRY.

Contrary to the generally received opinion, it is probable, from the result of some experiments detailed by M. Guy Lussac,* that muscular fibre is not converted into fat by the long continued action of water; but that, when a portion of flesh is exposed to this agent, the muscular fibre, strictly speaking, in consequence of the putrefactive process which it undergoes, is dissolved in the water, and leaves the fat which is insoluble. This opinion is also supported by M. Chevruel.

Intestinal gases.—Vauquelin having examined the air found in the abdomen of an elephant, who lately died at the Museum of Natural History in Paris, found it to contain, besides azote and a small quantity of sulphuretted hydrogen, a gas resembling carbonated hydrogen gas, but differing from it in the proportions of its principles; the weight of the hydrogen being to that of the carbon as 5.5 is to 21.4. A litre of this gas weighed

45 centigrammes.†

Glandular calculus.—In the maxiliary glands of the same elephant, several white calculi were found; some crystallized in regular tetrahedrons, others of an oblong form, and having a

† Journal de Pharm. vol. iii. p. 205.

^{*} Annales de Chimie et de Physique, tome iv. p. 71.

grain of oats as a nucleus, and some without any regular form, but, like the others, breaking with a lamellar fracture. Vauquelin, who examined the chemical properties of these concretions, found them to be composed chiefly of carbonate of lime, some phosphate of lime, and an animal matter.*

NATURAL HISTORY.

Dr. Horsfield, of the island of Java, has published a particular account of the celebrated poison of the Oopas, or Upas, which is produced in that island. The tree supposed to give rise to this poison was for a long time the subject of fabulous and absurd representations, which had obtained some credit, even with the learned. A French naturalist, Leschanault de la Tour, was the first who demonstrated the falsehood of this account, and pointed out the real source from which the Javanese obtain the poison bearing the name of Upas. It appears that this poison is of two kinds, one of which is obtained from a tree, and the other from a shrub. The tree, which is called antshar, according to Dr. Horsfield, has a cylindrical, perpendicular trunk, which is naked to the height of seventy or eighty feet. Upon wounding this trunk, a thick, milky, or yellowish juice exudes, which, when collected, constitutes one species of the poison. The other species, and the one which is most powerful, is obtained from a climbing shrub, or vine, which bears the name of tshettik. The stem, which, in full grown individuals is two or three inches in diameter, extends to a considerable distance, sometimes climbing to the tops of the highest trees. The bark of the root of this vine is boiled in water, and the decoction evaporated to the consistence of a syrup, in which state it constitutes the second species of poison. The Javanese, previously to poisoning their arrows with these substances, mix with them a number of other substances, such as pepper, garlic, galangale, &c. which, however, do not probably add to their poison. Dr. Horsfield has made a great number of experiments on animals of different kinds, by introducing small quantities of the poison into the circulation, by a wound with a poisoned instrument. It proved speedily fatal, after occasioning very violent symptoms.

The vegetable production found on the ears of rye and other grains, and usually known by the French name of ergol, was formerly a subject of notoriety, from an injurious quality which it was supposed to communicate to bread. In the United

^{*} Journal de Pharm. vol. iii. p. 208.

States it has recently been introduced as an article of the materia medica. Since its introduction to use in this country, the ergot has became a subject of considerable attention in Europe, and particularly in France. The generally received opinion in regard to its production has been, that it is the effect of disease in the plant, by which the natural grain is converted into a large irregular excrescence. Professor Decandolle, a distinguished botanist of Montpellier, has published a memoir, in which he attempts to prove that the ergot is not a morbid change in the grain itself, but a parasitic fungus, a species of sclerotium, which attaches itself to the ear, and grows in the place of the grain. His opinions were controverted by M. Virey, who vindicated the old opinion, that this excrescence is the effect of a disease in the grain. In consequence of this diversity of opinion, the French Institute ordered an investigation of the subject by a committee. Their report, read by Defontaines, after a thorough examination of the subject, concludes in favour of the opinion of Virey, that the ergot is the effect of a morbid change in the grain itself, and not a parasitic plant. During the investigations, Vauquelin undertook an analysis of the ergot of rye, which he found to contain the following constituents. 1. A pale yellow colouring matter, soluble in alcohol. 2. An oily matter. 3. A violet colouring matter, insoluble in alcohol, and easily applicable to wool and silk. An acid, probably phosphoric. 5. A vegeto-animal matter, very abundant, and prone to putrefaction, yielding much thick oil and ammonia by distillation.

The Andes of South America have long been cansidered as the chief of mountains, and the Chimborazo, their highest peak, has been esteemed the most elevated point on the surface of the globe. This, however, is no longer the case. The great central chain of Asiatic mountains, known in Thibet by the name of Himalaya, and supposed to be the Mons Imaus of the ancients, appear, from very late observations, to be much more elevated than those of South America, and in the present state of our knowledge, are intitled to rank as highest in the world. These mountains have until lately been little known, on account of their situation in the midst of nations with whom Europeans have little intercourse. In a journey lately performed by lieutenant Webb, and captain Raper, the height was taken trigonometrically of twenty-seven peaks in the great snowy chain. Twenty-one of these peaks were estimated to exceed 20,000 feet in height, and the highest of them was 25,669 feet above the level of the sea. A similar calculation had been made, previously to this, by Col. Crawford, at Cat'mhandu.

In the last volume of the Asiatic Researches, is a memoir on the height of these mountains by the president. It states that the Himalaya chain is visible from Patna, on the southern bank of the Ganges, as a continued well defined line of white cliffs, extending through more than two points of compass, at a distance of about sixty leagues; while at an equal distance, Chimborago, the highest of the Andes, is seen only as a single point, the rest of the chain being invisible. It appears from the account of captain Turner, that the peak of Chamalasi, near which he passed after crossing the frontier of Thibet, is the same mountain which is seen from various stations in Bengal, the farthest of which is not less than 232 miles distant. This, in the mean state of the atmosphere, would require an elevation of 28,000 feet to be visible, though less might suffice under circumstances of extraordinary refraction. Other calculations which have been made, after making the greatest allowance for refraction, give to the principal peaks, an elevation of 26 to 27,000 feet, an altitude much exceeding the highest point of the Andes.

Some observations on Dr. Rush's work, on "the Diseases of the Mind." With remarks on the Nature and Treatment of Insanity. By George Hayward, M. D.

MONG the improvements of modern medicine, we cannot boast the acquisition of any considerable ascendancy over the diseases of the mind. From the time of Hippocrates to the present day, embracing a period of more than two thousand years, we find accounts in the writings of eminent physicians, of mental derangement and its varieties, histories of individual cases, with enumeration of the exciting causes and remedies, and yet we are nearly as far, at the present time, from any plan of medical treatment that promises much success, as the ancients were at the commencement of the healing art. It is a well known fact, that most of the remedies that are now in use in Europe and this country, and which retain the greatest share of reputation, are precisely the same as were recommended by Aretæus and Celsus, eighteen hundred years ago.*

^{*} In the thirtieth number of the London Quarterly Review, it is stated, that a remedy for madness, which some years since excited considerable attention in England, was supposed to consist in an "immersion of the patient's body in very hot water, and, at the same time, pouring a stream

Several causes have, no doubt, contributed to retard improvement in the medical treatment of the insane. As one of these may be mentioned the fact, that physicians have not, until within a few years, been agreed as to the seat of insanity. The ancients were almost unanimously of opinion, that it arose from disease of the abdominal viscera; and the term melancholy (derived from two Greek words, meaning black bile) by which they distinguished one species, shows that they thought there was derangement in the secretion of one of those organs. It is evident, that while there was a doubt as to the seat of the disease, no curative plan could be adopted upon any sure or promising foundation.

Another cause may be, that though pathologists of the present day are pretty well satisfied that in all cases of insanity, the brain, or its appendages, or both, are in some way disordered, they pretend not to say precisely how, yet from the extreme difficulty that has attended all investigations of the physiology of the mind, the subject seems to have been almost

abandoned in despair by medical men.

But though we cannot examine by our senses the faculties of the mind, as we do the organs of the body, nor understand the wonderful connexion of matter and of mind, and their constant action and reaction upon each other, yet much may be learnt by an accurate analysis of our own intellectual faculties and operations. An intimate acquaintance with the philosophy of the human mind, is indispensable to him who would hope to treat its diseases with success; he might as well expect to understand the pathology of the body, without a knowledge of its structure and functions in health.

There is still much obscurity relating to the phenomena of mind, as well as to the physiology of the brain; though in regard to the first, the labours of Mr. Stewart in particular justify the hope, that much more light may yet be thrown upon this interesting subject; and as to the second, whatever opinion may be entertained of the physiological researches of Drs. Gall and Spurzheim, yet their method of developing the brain may ultimately lead physiologists to a better knowledge of the functions of that organ.

of cold water on the naked head." In a note, the reviewers observe, that this process is described by Celsus in express terms, and quote, in proof of the assertion, the following sentence:—"Super caput aqua frigida infusa, demissumque corpus in aquam et oleum." But this is certainly a different process, and there is nothing, in any part of that author's writings, that justifies the opinion, that he was acquainted with the remedy mentioned in the Review.—Vide Liber 3. cap: XVIII. of his works. Haller's edition.

Another cause, probably, of the repeated failure of almost every attempt to relieve insanity, is, that mankind have too often considered the disease beyond the controll of medicine, and the unfortunate patients have usually been abandoned to the care of ignorant or designing empirics; or when they have been placed under the direction of medical men, it is not in the early stages of their disease; it is, in fact, usually permitted to continue so long, that some organic changes are produced in the brain, before medical advice is obtained. Recent cases of insanity may be very often cured, while those of long standing are almost always hopeless. By a calculation that has lately been made in Great Britain, upon a large scale,* it appears, that of recent cases, seventy-six patients of every hundred were relieved, while there were only nineteen out of the same number, whose disease had been of long standing. Perhaps, therefore, it would be adviseable to admit into public institutions at a lower rate, all patients whose disease was recent. plan has been adopted at one asylum in Great Britain.

Numerous treatises on mental derangement have appeared at different periods in Europe, but the work of Dr. Rush, which was published in 1812, is the only original one, that was ever printed in this country. From this circumstance, as well as from the fact of the alarming increase of insanity within afew years, and the uncommon attention which it has lately excited in this vicinity, it was thought that an abstract of its contents might be interesting, if not instructive, to some of your readers. In doing this, the writer has not confined himself exclusively to the views that the author has taken of the subject, but has endeavoured to present, in as concise a manner as possible, the opinions of others, of equal eminence, on the nature and treatment of insanity. A few objections have been made to some parts of the work, because it was thought that the erroneous views of so distinguished a man, were particularly calculated to mislead; and not from any want of respect for his character and professional acquirements. The writer of this remembers Dr. Rush, as an impressive, eloquent, and instructive lecturer, and is fully aware how much his labours advanced the cause of medical science in the United States. Though he may controvert some of his opinions, it does not lessen the respect he feels for his memory.

The first chapter treats "of the faculties and operations of the mind, and of the proximate cause of intellectual derangement." The faculties, he says, "are understanding, memory,

^{*}Vide Edinburgh Review, for August, 1817.

imagination, passions, the principle of faith, will, the moral faculty, conscience, and the sense of Deity." Though authors are not agreed, as to the precise number of the faculties of the mind, there are none in the list of Dr. Rush, except memory and imagination, that have ever been so considered by metaphysical writers. The faculties of perceiving, judging, remembering, associating, and imagining, constitute the catalogue usually given. Some have added the faculties of conceiving, combining, and abstracting, though others have thought that these are rather the effects of the five principal ones. Conscience and the will have been called principles, because they have not the power, like the faculties, of modifying our perceptions or sensorial impressions. The moral faculty, sense of Deity, &c. are probably the result of a proper, and well directed exertion of our intellectual faculties.

The remainder of the chapter consists of remarks upon the proximate cause of insanity. Dr. Rush endeavours to show, that it is not seated in the abdominal viscera, the nerves, or the mind, except through the medium of the body, and his observations on these subjects are interesting and conclusive. In attempting to establish his own theory, viz. that it is seated in the blood-vessels of the brain, he seems not to have been so fortunate. He does not say in precisely what state he considers the blood-vessels to be, though it may be gathered from his remarks generally, that it is that of increased fullness, or turgescence. It is a well known fact, however, that this takes place daily, in almost every individual, from violent exercise. or over-exertion of any kind, without producing the slightest symptoms of delirium, or any unpleasant effects whatever: and even where there is an increased determination of the blood to the head, sufficient to produce phrenitis, it either speedily ends in death, or yields to the depleting remedies, and if mania is the consequence, it is after the crowding of the blood-vessels has subsided. If the blood-vessels were the parts diseased, no matter in what way they are supposed to be affected, dissections would probably discover the same appearances in the brains of nearly all maniacal patients; but the testimonies of Bonetus, Morgagni, and Arnold, are sufficient to prove that the fact is far otherwise. In controverting this opinion of the author, it is intended merely to say, that there seems not to be satisfactory evidence, that the proximate cause is in every instance seated in the blood-vessels, though there is no doubt that frequently an irregular and unhealthy action in them may produce that state of the brain, which exists in insanity. that precise state of the brain is, whether the whole, or a part

only is affected, or what diseased action is going on in mental disease, it is impossible for any one to determine. New discoveries in morbid and healthy anatomy may hereafter eluci-

date this dark and important subject.

In the second chapter, the author gives an account of the exciting and predisposing causes of insanity. The exciting causes are divided into such as act directly upon the body, and such as act indirectly through the medium of the mind. In dividing them in this way, he has followed the arrangement of Dr. Arnold, which is probably preferable to that of any other writer. The bodily causes are, 1, Those that are seated in the brain and its appendages. Under this head may be mentioned a peculiar hardness of that organ, tumors, hydatids, and excrescences in various parts of it, disease of the pineal gland, extravasated blood, or water in the ventricles. 2. There are external causes that act mechanically on the brain. Such as exostoses, fractures, and depressions of the skull, concussion of the brain, and insolation or sun-stroke. 3. There are causes which produce insanity, by their influence on the brain, through the medium of the body in general. Such as fevers, inanition, excessive indulgence in venereal pleasures, and intemperance in living. 4. Insanity is frequently produced by causes that primarily affect other parts of the body, and the disease is either suddenly or gradually conveyed to the brain by metastasis or sympathy. Madness sometimes is the consequence of a long continued disease of the abdominal viscera, and the retention or suppression of any customary evacuation has been followed by mania. Several diseases, particularly gout, erysipelas, and other affections of the skin, are oftentimes suddenly translated to the brain, and produce derangement of the intellectual faculties.

The mental causes of insanity are, intense study, close application of the mind to any subject that requires long watchfulness, and all the passions, when they are not well regulated, especially excessive joy, grief, disappointed love, religious fanaticism, avarice, &c.

It appears, from the best authorities, that there are considerably more cases of insanity from mental than corporeal causes, though it would be difficult, perhaps, to say what proportion they bear to each other. This fact, which is noticed by Pinel and others, is confirmed by Dr. Rush, who ascertained, that of fifty maniacal patients, the disease of only sixteen was produced by corporeal causes.

The predisposition to a disease is that state of the body that renders it peculiarly liable to be affected by its exciting causes.

The predisposing causes of insanity are either hereditary or acquired. It has often been observed, that the children of persons who have been insane, are more liable to attacks of detirium than others; and it cannot have escaped the notice of any, that mania will oftentimes affect the members of the same family of successive generations. As children not unfrequently inherit from their parents a resemblance in the features of their faces and forms of their bodies, it appears equally natural that there should be a similarity in that peculiar structure and organization of the brain, upon which depends either its healthy or morbid actions.

The disease does not, however, necessarily take place, though a predisposition may exist; it may be prevented, if the exciting causes are avoided. A predisposition also may be acquired, by a frequent or long continued exposure to the action of some of the exciting causes. As these have already been noticed, it is only necessary to refer to them here; it may be remarked, however, that intemperance is probably the most

frequent, as well as the most certain in its effects.

The six next chapters, which are devoted to the consideration of the various forms and remedies of insanity, embrace the only subjects that remain to be noticed. It may be recollected, that Dr. Rush, some years since, obtained considerable notoriety, by an attempt which he made to establish the doctrine of the unity of disease, as he termed it, in opposition to the commonly received nosological arrangement. In support of this he maintained, that all diseases consisted in morbid excitement, and consequently were not capable of division into classes and orders, like substances having permanent characters. will be perceived at once, that he entirely overlooked the difference that will necessarily exist in morbid affections, from the difference in the causes which produce them, as well as in the parts affected; and though it may be admitted that all diseases consist in morbid action, it by no means follows, that all diseases are the same. Every nosological system is of course founded upon the fact, that among all diseases, there are certain points of resemblance, sufficiently strong to justify the arrangement of them under some general classes, and points of difference so clearly marked, that they may be subdivided into orders, genera, and species. This has always been considered to be merely a matter of convenience, and no one probably but Dr. Rush, ever apprehended any practical danger from it. it was necessary in every history of disease, to enumerate all the symptoms, instead of making use of one general term which embraced them, there would be no end to the labour it would

occasion. Nothing however would be more absurd than to prescribe for a disease, after having been furnished only with the name, and whatever the author may have thought upon the subject, it may be doubted, whether any practitioner is ever governed in his prescriptions, except by the symptoms of the case before him.

This notice has been taken of the subject, because there is frequent reference in the present volume to the doctrine of the unity of disease, and at the same time a disposition is shewn to add new names to the long catalogue already in the nosology. Madness, for example, is subdivided into mania, manicula, and manalgia, and the same thing the author has done in his other writings, with regard to hepatitis, and rheumatism. There really seems to be no use whatever in these minute divisions, and they appear particularly unreasonable when they are proposed by a man, who is continually declaiming

against all classification of diseases.

The division of madness into melancholia and mania, which was made by the early Greek physicians, has been adopted by almost every writer since their time; though the two species do not seem to have characteristics so strongly marked, that they may be in every instance distinguished; in fact they are often known to alternate with each other in the same individual. The ancients considered melancholy to be marked by the circumstances of the absence of fever, and derangement of mind, in relation to one subject, attended with fear and dejection; while mania was said to be delirium without fever, with fury and audacity. These definitions, or some of similar import, are given by Hippocrates, Aurelianus, Aretæus, Galen, and others, and repeated by many modern authors. Dr. Ferriar has endeavoured to point out the difference between them, by saying, that "in maniacal cases, false perception, and consequently confusion of ideas is always a leading circumstance," while "the contrary state to false perception, an intensity of ideas constitutes melancholy." It must however have been noticed by every one accustomed to see insane patients, that these two forms of disease are continually running into each other, and that melancholic patients often become furious without any apparent cause, while the most violent maniacs have been known suddenly to be dull, quiet and dejected, though there was not the slightest return of reason.

It must be confessed, that it would be extremely difficult, in the present state of our knowledge, to give an accurate and comprehensive definition of insanity, or to make an arrangement of its different species, that would embrace every variety.

The attempt of Dr. Crichton is perhaps more deserving of notice than that of any other author, particularly his definition of intellectual disease, for his arrangement is liable to some objections. "All delirious people," says he, "no matter whether they be maniacs, or hypochondriacs, or people in the delirium of fever, or of hysteria, differ from those of a sound mind in this respect, that they have certain diseased perceptions and notions, in the reality of which they firmly believe, and which consequently become motives of many actions and expressions, that appear unreasonable to the rest of mankind." He prefers the term diseased perceptions and notions, to that of false and erroneous perceptions, "first, because the ideas in all kinds of delirium whatever, arise from a diseased state of the brain, or nerves, or both, as will be satisfactorily proved; and secondly, because the word erroneous does not describe any thing peculiar to delirium; for every man, however sane or wise he may be, has some erroneous notions, in which he firmly believes, and which often seriously affect his conduct." He divides the exciting causes into four classes. 1. Physical, or corporeal causes. 2. Over-exertion of the mental faculties. 3. Disproportionate activity of some of the faculties; and lastly, the passions, or their influence. He entirely disregards the ancient division of insanity, and proceeds to treat of delirium as arising from physical causes, and afterwards of the diseases of each of the faculties of the mind, and of those of the passions. It is extremely doubtful, whether at present this arrangement will be attended with any practical advantage. It supposes an acquaintance with subjects, that are but obscurely known, and founds its divisions upon a minute and thorough knowledge of the physiology of the mind, which is far from being generally well understood.

Dr. Arnold, in a work of much learning, and apparently the result of long and patient investigation, has taken a different view of mental disease. Adopting the opinion of Locke, that all our ideas are derived either from sensation or reflection, he calls those of the first class only, ideas, and those of the other, notions, and thence divides insanity into two kinds, viz. ideal and notional. "The first is characterized by a delirium, arising from an error in the ideas of the person; and the second, by a delirium arising from an error in his notions." Ideal insanity is subdivided into four species, and notional into nine. The objections to this arrangement are so numerous, and powerful, that they will prevent it from ever being generally adopted. It may be sufficient to observe, that the names and the definitions which he gives of the various species, do not point

out diagnostic symptoms by which they may be discriminated, and it is hardly possible that this should be done, as the ar-

rangement seems to have no foundation in nature.

Dr. Rush has followed the track of most writers who have preceded him, and divided insanity into melancholy and mania. though he proposes to call the first amenomania, and substitute the term tristimania for hypochondriasis. To this division it has already been objected, that it is not sufficiently definite, and the terms that the author has introduced are not at all calculated to elucidate the subject. It is to be hoped, that as more enlarged views are obtained of intellectual disease, a more precise and natural classification of its various forms will be the consequence. But this can only be done, by a better knowledge of the physiology of the brain, and the changes that organ undergoes in mental derangement. With a view to this desirable object, the intimate structure of the brain should be studied with constant and unceasing diligence, and every new fact connected with its healthy or morbid anatomy, faithfully recorded. By observing every circumstance relating to its diseases, and carefully comparing the morbid appearances, upon dissection, with the symptoms during life, a correct theory of mental disease may perhaps be ultimately formed. At present, therefore, it will be most convenient to follow the common arrangement, with the belief, that, as our knowledge on these subjects is advanced, a more useful and natural classification will be established.

The diseases of the mind assume such a variety of appearances, that it would be impossible to give an accurate account of all the symptoms, without very much exceeding the limits of this article. The abstract which is presented is therefore short, and consists merely in a hasty sketch of an ordinary case of what is termed general madness. The patients, in the beginning of the disease, are usually wakeful, with a considerable elevation or depression of spirits, and an evident incoherence in their language, and eccentricity in their deportment and manners. The countenance is continually varying, at one time flushed, at another, pale and lifeless; the eye is sometimes unusually bright, and penetrating, at others, dull, heavy, and stupid. The appetite for food is for the most part increased, the bowels are costive, the urine scanty and high coloured. The pulse is variable, sometimes hard and full, at others, præternaturally slow, then small and quick, or frequent and depressed. The senses of seeing and hearing are extremely acute, while there is a morbid insensibility to cold. Sometimes the patients complain of pain, dizziness, and vertigo in

the head, and are disturbed with uneasy sleep, and frightful dreams. Soon some extravagance will be discovered in their actions, and they take a strong dislike to their connexions and friends. If nothing is done to allay these symptoms, the disease shortly appears in its full force, and the patients become violent and impatient of restraint. The causes that have produced their insanity, as well as their former habits and dispositions, usually give a complexion to their disease. It has, however, been remarked, that the reverse is sometimes true, though by no means of so frequent occurrence. Insanity, in fact, appears under such different aspects, that no two cases precisely resemble each other; the few symptoms that have been enumerated, are only those of the most general kind. They are detailed by Dr. Rush, at some length, and with great accuracy, though rather in a diffuse and desultory manner. is, throughout the work, too great a disposition to draw general conclusions, from individual and insulated facts, and to erect a theory upon too feeble a foundation.

Upon the prognosis of insanity, the author has made a number of observations, and given several of "the signs of a favourable or unfavourable issue." The disease yields more readily in the young than the old, in women than in men, in those who have not children, than in those who have. It gives way sooner when it is the consequence of corporeal, than of mental causes, and it is more difficult to cure, and more liable to return, when there is a hereditary predisposition, than under other circumstances. Remissions, intermissions, and lucid intervals are favourable; so are abscesses in various parts of the body, warm and moist hands, when the patients have previously had cold ones. Madness, which succeeds an organic injury of the brain, epilepsy, chronic headach, palsy, and fatuity, is generally incurable; while that arising from the common causes of fever, parturition and intemperance in drinking, usually yields to the power of medicine. These are among the most prominent

mania.

There is some degree of superstition, even among the well informed, in relation to insanity, and many writers on the subject have attributed considerable influence to the moon, in heightening its paroxisms. This opinion, which was universally adopted by the ancient physicians, has found some advocates in modern times, though it is evidently losing ground. Dr. Rush made particular observations, with a view of ascertaining if it was deserving credit, and concluded, "that the cases are few in which mad people feel the influence of the moon, and

and important circumstances, connected with the prognosis of

that when they do, it is derived chiefly from an increase of its light." As this opinion coincides pretty nearly with that of Haslam, and many accurate and intelligent observers, there can

be no hesitation in admitting its correctness.

The only subject that remains to be noticed, and which is perhaps more important than any that has been spoken of, is the moral and medical treatment of the insane. Within a few years, an entire revolution has been effected in the moral management of this unfortunate class of patients. This is attributable, in part, to the pure and enlightened humanity of the Quakers in Great Britain, who first illustrated the good effects of a mild system, at their asylum at York, in England; and more, perhaps, to that active benevolence, which forms one of the striking characteristics of the age. Until this period, maniacs were not unusually confined, without regard to the difference of their cases, in damp, foul, and contracted cells, which were never visited by the rays of the sun, and hardly by the light of heaven. In these gloomy apartments, the unhappy sufferers were frequently chained to the floor, deprived not only of the amusements and comforts which their situation required, but even treated with brutal harshness. Many have lingered for years, afflicted with this awful visitation of heaven, but suffering still more cruelly from the inhumanity of man. Not a single effort was made for their relief, and for months and years they were never cheered with the sight of a friend, nor gladdened by the voice of kindness or compassion. Happily our country has been a stranger to these iniquities, which were too long suffered to disgrace so many of the asylums of Europe. Until within a very short time, humane, sensible, and experienced writers, have recommended in many cases, a severe and rigorous discipline, and speak of chastising these unfortunate beings, with the same indifference as they do of the other remedies. Even Cullen maintains the propriety of resorting to "stripes and blows," to gain an ascendancy over their minds, and Dr. Willis, it is believed, approved of a method not very different.

Upon the first decisive symptoms of insanity, the patients should be removed from home, and placed under the care of strangers. This is necessary, in order to break up their old associations, and to obtain that controll over them, which their situation requires. At the first visit of the medical attendant, he should convince them, if possible, of the folly of resistance, by showing them that it is in his power to restrain their greatest violence, and punish their excesses. Dr. Rush thinks that they may be awed, by looking them steadily in the face, and

constantly endeavouring to catch their eye; he has, perhaps, attributed more power to this than it possesses. The manners and language of the physician should always be gentle, dignified, and affectionate. He should never condescend to trifle, or notice their rude and insolent remarks, except in the way of reproof. He should conscientiously fulfil every promise, and pay, in every instance, the strictest regard to veracity, in all statements he makes to them. If maniacs have been once deceived, they will never confide again in the same person. In those cases where they are violent, they may be prevented from injuring themselves or others, by a strait waistcoat, or by hand-cuffs, made of leather, to which cords may be attached. This is now considered preferable to any other method. verer means are hardly ever required; the cold shower bath, or the tranquillizer, mentioned by Dr. Rush, or the sudden immersion in cold water, or the denial of certain favourite amusements, may be employed as punishments, if the patients are perverse and troublesome. In violent paroxysms, they should be kept in dark apartments, and in an erect position. "The duration, however, of such a degree of violence as to render restraint necessary, is fortunately very short; never, says Mr. Bakewell, extending to a month together. Of sixty patients in the Retreat, the average number under restraint at any one time, was not more than two." Vide Edinburgh Review, for August, 1817. Their diet is to be regulated, in great measure, by the state of the system; it should, however, be mild, simple, and not very nutritious. Exercise, and even labour in the open air, are useful to maniacs. It is important to employ all in some kind of occupation, who are not prevented by the violence of the disease, and this should be, as far as is practicable, adapted to their former mode of life. In publick hospitals, there are generally a sufficient number of patients, who are able to cultivate an extensive garden, besides assisting in the work of the house. Most writers, of late, have insisted upon the importance of classing the subjects according to the state of their disease, and of allowing various kinds of amusements to those who are capable of enjoying them. It may be observed also, that great advantage has been supposed to have been derived, from requiring a regular attendance upon devotional exercises daily, as-well as on Sundays, of all who are peaceable in their deportment. The subjects of an asylum should rarely be visited, except by the physician and attendants; the presence of strangers often increases their disease, or at least retards the cure. Relapses have taken place, from the exposure of patients to company, before their health was perfectly re-established.

Though the medical remedies are not so much to be depended on in the treatment of insanity, as the moral management, they should never be neglected. One of the most powerful and valuable of these is blood-letting. The propriety of it is to be determined by the state of the system, and it is particularly indicated in all recent cases, where there is frequency, strength, and fullness in the pulse. In cases of this sort, Sydenham considers the use of the lancet highly important, and advises to draw blood, not only from the arm, but from the jugular vein. It is not unusual in mania, especially from corporeal causes, to meet with a depressed pulse, arising from what Dr. Rush terms suffocated excitement; if venesection is performed, under these circumstances, the pulse rises, and frequently a cure is effected, if a large quantity of blood is drawn. There seems to be no remedy so well calculated as this, to diminish excessive arterial action in the brain, and the propriety of its use in many cases of mania, is rendered evident, by the delicate structure of that organ, and the injury it would sustain by a long continued plethora of its vessels, as well as from the benefit maniacal patients have frequently experienced, from spontaneous hæmorrhages. In the recent affections of young subjects, when blood-letting is employed, it should be copious, and its good effects are increased by compelling the patients to stand while the operation is performed, so as to produce fainting, and afterwards confining them to diluting drinks, and a low and spare diet. ever, is proper only in those of a plethoric habit.

There are cases also where there is congestion upon the brain, and at the same time general debility; it is then that topical bleeding is indicated; this can be done, by opening the temporal artery, or external jugular vein, or by applying cups, or leeches; perhaps the last is most convenient, and equally

efficacious with others.

It ought however to be observed, that Pinel is strongly opposed to blood-letting in almost all cases of insanity, and says that it has rarely been practised at the Salpêtriere, since he has had the charge of the hospital; that he has scarcely ever known any good effects from it, but has seen idiotism follow copious bleeding. He does not, however, give any information concerning the state of the patient's system, in those cases where the effects are prejudicial, nor say any thing as to the force or frequency of the arterial action. Although his opinion is entitled to respect, it should not be admitted, in direct opposition to what appears to be the fair deduction of reason, as well as the experience of Sydenham, Rush, and other enlightened men. There can be no doubt as to the propriety of treating

insanity as we do other diseases, according to the symptoms of each case, for surely no one will pretend, that of all the remedies that have been tried, any one of them is entitled to the

character of a specific.

Cathartics have been long known to be useful, in the various forms of madness. In those cases where blood-letting is used, the saline purgatives are preferable, and Cullen recommends the tartrite of potash, or soluble tartar, as more useful than any other. When cathartic medicines are given to carry off the contents of the intestines, and at the same time to promote the secretion of bile, and the other fluids that are poured into the intestinal canal, the submuriate of mercury is the most efficacious. This class of medicines, however, is used in various cases of mania, with a view of producing a determination of blood to the abdominal viscera, and thereby relieving the brain from congestion, if that state of the organ should exist; on this account aloes, which stimulates the rectum, gamboge, scammony and other drastic medicines have been employed. Many authors are of opinion, that the hellebore, * which is so repeatedly spoken of by the ancient poets and physicians, as a remedy, and almost a specific for madness, owes its reputation entirely to its cathartic properties. Dr. Arnold, however, believes, that the moderns are either ignorant of the plant formerly used, or the manner of using it, or in other words, that they have lost the art of helleborism, as it has been termed. Van-Swieten, the celebrated commentator on Boerhaave, speaks of the remedy as if it was well known, though he prefers mercurial purges to it. Cullen, Rush, and others, mention it as a drastic cathartic, but do not intimate that the plant is not known at present, or that the knowledge of its use is lost. nel expresses no doubt as to our acquaintance with the remedy, but is strongly opposed to the administration of it, for he says it sometimes produces hypercatharsis, obstinate vomiting, convulsions, inflammation of the intestines, and even death. Similar effects are ascribed by Pliny, to the injudicious use of the white hellebore, but many practitioners at the present day, are in the habit of using both species, in moderate doses, in the form

^{*} Modern botanists are of opinion, that the black hellebore of the ancients, is the Helleborus Niger, or Orientalis, and the white, the Veratrum Album; the first is an active cathartic, the other an emetic. These are the same properties that the ancients ascribed to the two species then in use, as may be seen by referring to the 25th Book of Pliny's Natural History. The plant is sometimes spoken of by the old writers, under the name of Helleborus, and at others, Veratrum; the chapter, however, in the works of Hippocrates de usu Veratri, is supposed to have been written since his time.

either of extract, or tincture, not only without producing any unpleasant symptoms, but oftentimes with the most decided advantage. Celsus directs the administration of cathartics of black hellebore, when the patients are sad and dejected, and emetics of the white, when they are too much exhilarated. If they refuse to take the medicine, he says it can be mixed with bread, and that they are easily deceived in this way; probably he used the extract. This writer, in common with many others, speaks so strongly of the good effects of hellebore in maniacal cases, that it surely deserves a trial; and it may be satisfactory to state, that experiments are now making on the subject, at the Asylum at Glasgow, in Scotland.

Within a short time, a physician, whose name, were it mentioned, would give weight and authority to any statement, informed the writer of this article, that he had found, that the white hellebore oftentimes diminished the frequency of the pulse, with not so much certainty as digitalis, though in many cases it decidedly produced the effect. This is evidently an argument in

favour of its use, in some forms of mania.

Physicians are not agreed as to the value of emetics in the treatment of insanity. From the determination which they create towards the skin, some have supposed them useful, while others maintain that these good effects are more than counterbalanced by the increased impetus of blood to the head, which they produce. The remedy is not so popular as it formerly was, though a Mr. Hill, in England, has lately spoken favourably of it.

Dr. Ferriar strongly recommends the administration of the tartrite of antimony, in small doses, in certain stages of insanity, sufficient only to excite nausea, and thinks that by its use he has relieved several patients. All his opinions are entitled to

respectful attention.

Blisters to the head, are less used now than they were some years since, though they are frequently applied to the back of the neck, arms, ankles, and other parts of the body. It is probable, that in cases where there is active inflammation, either on the brain or its membranes, they would have a tendency rather to increase than diminish it, from their contiguity to the diseased parts. In recent cases, therefore, where the arterial action is great, cold applied to the head in the form of water, snow, or ice, or that produced by the evaporation of alcohol, or ether, is preferable to vesication. Dr. Willis, who acquired great celebrity in England, by relieving the king, some years since, preferred, it is said, blistering the ankles in madness, and it is well known, that many of the most eminent of the French

physicians, do not think it safe, even in pneumonic inflammation, to vesicate immediately over the parts affected, but make the application to the arms, or to some place even more remote from the disease. In chronic inflammation of the brain, however, the whole external surface of the head may be blistered with great advantage, and setons and issues in the neck have been found beneficial.

The effects of mercury have been tried in some cases of insanity, until a slight salivation was produced, and in a few instances the practice has been advantageous. It is probable that small doses of calomel, or the blue mercurial pill, might be administered with benefit to melancholic patients, in whom the functions of the liver were deranged; and perhaps it would be justifiable to resort to some preparation of mercury in cases of obstinate chronic mania, with a view of exciting a new action

in the system.

Contradictory and opposite statements have been made upon the virtues of musk, opium, digitalis, and camphor, in the treatment of mental diseases. This fact is sufficient to show, that none of them have any thing like a specific operation, and that though they may sometimes be beneficial, at others their effects are injurious. The propriety of their use is always to be determined by the state of the system. It may be remarked with regard to opium, that where it is administered to maniacs to procure sleep, it should be given in large doses, and at short intervals, otherwise it only increases their wakefulness.

A combination of bark with opium has been found beneficial in some melancholic cases, where there was debility of the

stomach with indigestion and loss of appetite.

All authors are agreed, that baths, either of cold, temperate, or warm water, are beneficial in the various forms of madness. Dr. Ferriar recommends cold baths in melancholy, and warm in mania, while Pinel prefers the temperate in both cases. The present opinion seems to be, that the warm bath is one of the most powerful means that are used in the treatment of insanity. From the good effects that Dr. Cox, and others have ascribed to the use of the swing, it is certainly deserving a trial; it is, no doubt, upon the same principle, that benefit has been derived from Dr. Rush's tranquillizing chair.

The most important medical remedies of insanity have thus been noticed, but it is only with a proper combination of these, with judicious moral management, that any considerable degree

of success can be anticipated.

There are several other chapters in the present volume, on fatuity, derangement of the will, principle of faith and memory,

and on dreaming, night mare, and somnambulism; but as these are rarely, if ever, subjects of medical treatment, it is not im-

portant to take any further notice of them.

Though the present volume contains many useful facts and cases, and some ingenious practical suggestions, it has added nothing to the well earned reputation of the author. There is not a sufficiently clear and connected view of the causes, nature, and treatment of insanity, to render it valuable to physicians, and it contains so many crude, theoretical views, that it cannot be any considerable use to students. Perhaps it is a little too much encumbered with technical phraseology to be very interesting to general readers, though they no doubt will consult it more frequently and with more pleasure than professional men.

Notwithstanding the imperfect view that has been taken in this article, of the nature and treatment of mental disease, an apology is perhaps due for the length to which it has been extended; if so, it may be found in the importance of the subject, and the interest it has so recently excited among us. "Of the uncertainties of our present state," says a celebrated moralist, "the most dreadful and alarming is the uncertain continuance of reason." It is not wonderful, then, that so much zeal has lately been displayed in relation to the establishment of an asylum for the insane. It is a concern that equally interests all the members of the community, and every one must have witnessed with delight, the pure, zealous, and signal benevolence, which our citizens have manifested. It is gratifying to think, that they can now lay claims to higher distinction, than they ever could have done before, by their earnestness in the cause of afflicted humanity. An institution founded for such laudable objects, and placed under the care of so many able and enlightened directors, will, with the blessing of Heaven, greatly contribute to ameliorate the condition of a distressed and suffering portion of our fellow beings.

Cases of Tetanus, treated with Arsenic. By NATHANIEL MILLER, M. M. S.

[To the Editors of the New-England Journal of Medicine and Surgery.]

Gentlemen.

F you shall be of opinion, that the following cases of Tetanus, contain any useful hints on the treatment of that unmanageable disease, you will be pleased to communicate them through the pages of your able paper.

On Sunday morning, June 1st, 1806, I was called to visit a son of James Perrigo, eight years of age, and of a robust constitution. At the first view I discovered that every few moments he was attacked with spasms about his jaws, neck, breast, and even his extremities. Although I never before saw a genuine tetanic affection, yet I was immediately impressed with the idea, that this was of that description. I then inquired into the history of his indisposition, and the family related the following:—that four days previous, (vis. on Election day, May 28,) he and his elder brother went about two miles a fishing, and were absent through the day. When they returned, his brother said, that during the day, he had often complained of being fatigued; of having considerable pain in his limbs; that it hurt him to walk, and that he frequently fell down. The next day, Thursday, he kept about as usual in the family, still said he was lame, and that it hurt him to walk. They supposed that he had taken cold a fishing, and that he had some rheumatic af-

Friday he was much the same, yet they were not apprehen-

sive that he laboured under any serious complaint.

The following day, Saturday, he complained that it distressed him to swallow. Early in the morning they sent him about half a mile on an errand—he had occasion to cross a wall; in getting over it he fell, and was unable to proceed any farther. The family being anxious to know the reason of his not returning, went in pursuit of him, and found him lying beside the wall. His mother led him home, and requested his father to send immediately for medical aid; but he, being a man habitually opposed to send for a physician in ordinary complaints of the family, still insisted that he would soon get over it. This night he was somewhat restless, and more unwell in the morning when

they sent for me.

I inquired if he had met with a hurt or wound of any kind; they answered no. I still pressed the question more closely, and they replied, that they believed he stubbed his foot about ten days ago, and was a little lame with it at first. I then examined the foot, and found on the ball of the heel a small aperture. On introducing a probe, I found an extraneous substance which I extracted, and which proved to be a small apple-tree thorn, about three fourths of an inch long. The finding of this puncture completely satisfied me as to the origin and nature of the complaint. I immediately acquainted the family of the danger of the disease, and requested them to call advice as soon as possible. I then gave him a cathartic of calomel to evacuate his bowels. In the afternoon Doctors Richardson and Mann

met and consulted on the case; they had no doubts but that it was the Lock-jaw, and advised the free use of opium, wine and the warm bath. The spasms still increased in violence and frequency, and his jaws became perfectly fixed; these were excited every five or ten minutes in a more distressing manner and affected at the same time both his body and limbs. Monday morning the symptoms were in no manner abated, though he had taken very large quantities of opium during the night, together with wine and brandy; he continued with the same symptoms through the day and night following; the same course of practice pursued, with the frequent use of the warm bath; on Tuesday morning, about ten o'clock, the scene closed in death.

About three weeks after the decease of this lad, I was called to visit in the same family a maiden girl of a good constitution, about twenty years old; who on examination I found was under strong tetanic symptoms. On inquiring whether she had received any injury of any kind, she told me that about a fortnight ago she ran a nail into her hand upon the inside; that the puncture did not trouble her much at the time, nor since, only it was a little tender; that her pains began about the shoulders and neck, with a kind of cramp two or three days since, and had been increasing until this time, and were now very troublesome. Having so recently witnessed the above fatal case, I had no doubts as to the nature of the disease, and accordingly pronounced it a tetanic affection. The symptoms at this time were principally confined to the neck and back with painful spasms

every fifteen minutes or oftener.

I directed her a cathartic of calomel and soon began with administering opium. The next day the symptoms were much increased—the spasms more universal, and extended to the jaws; the calomel had purged her. I ordered the warm bath, with an increased quantity of the anodyne; she appeared somewhat relieved for a short time after she was removed from the bath. On the next day the complaint was still more urgent; the spasms would bend the back, backward, and at the same time so affected the chest and throat, that she did not apparently breathe for more than a minute; in fact all this day I was apprehensive that she was near a period of a most miserable state of existence. All this time she took the opium, wine and spirit, as much as is usually given in these violent cases, yet none of the symptoms were in any measure mitigated, and I supposed by comparing this case with the other, that she would expire in the course of the night. Being about to leave her for the evening it occurred to me that I would give her a

quantity of Fowler's mineral solution, and try its tonic power in this disease. While I was preparing it, I ordered her again put into the warm bath for about twenty minutes. I put into a decanter twenty table spoonfuls of brandy, two hundred drops of liquid laudanum, and determined that I would add one hundred drops of the solution. I dropped of these until I counted one hundred, and then rather turned off my eyes, and poured a stream; notwithstanding this, I immediately gave her one table spoonful of the mixture, (which contained ten drops of the laudanum, and probably about ten drops of the solution,) and ordered her to take one every hour, if it produced no distress of the stomach or bowels, &c. &c. It gave a wonderful relief, and she continued it as I first directed, until I saw her in the morning; she had slept considerably through the night, and had scarcely a symptom of the spasms since she began with the medicine. She could converse well-had her reason, and expressed fearful apprehensions that the fits would return. 'I continued the mixture for two or three days, gradually diminishing it in quantity and frequency. There was no specific operation of the arsenic to be discovered, unless it was her being remarkably thirsty the day after she began to take the medicine, and which continued for two or three days, and then subsided, attended with all the appearance of returning health, which was soon realized.

In January, 1813, I was called to consult with Doctors Richardson and Knapp in Walpole, on the case of Mrs. Clapp, who was rather of a delicate constitution, about twenty-five years of age, and who had ten days before, run a needle into one of her fingers, which had given her some uneasiness ever since. I was also informed that for about thirty-six hours past, she had been affected with spasmodic pains up the punctured limb, and about the neck, back, and breast, which had been gradually increasing in frequency and severity. They now occurred about every ten minutes, with a complete rigidity of the muscles of the jaws; in this interim of attack, she had been catharticised, and taken laudanum in considerable quantities. I noticed also that the medical gentlemen had suggested and were in readiness to apply the "Bar-iron Practice" to the spine. I had no doubts that the prevailing symptoms were tetanic, and from the favourable result of the previous case, I was in favour of giving the mineral solution, and of their still applying the iron. was fitted to the curvature of the spine-heated and applied in the manner recommended. This was in the evening. We then made a mixture of ten spoonfuls of brandy, one hundred drops of the saturated tincture of opium, one hundred drops of the mineral solution, and directed them to begin, and continue

to give her, a table spoonful of the mixture every hour, (unless there should be some specific operation of the arsenic, viz. distress, or sickness at her stomach, pain in her bowels, &c. &c.) until the spasms should yield. Six hours after she began with the mixture, the spasms and rigidity had nearly subsided. She was now ordered to continue the use of it every hour, in half the quantity through the day; or increase it in case the spasms should return—otherwise, to withdraw gradually from it, as she recovered, which plan was pursued; there was no return of the spasms; but on the day following the first exhibition of the mixture, she complained of extreme thirst, which soon subsided, and she recovered her usual health.

In November, 1815, I was called to Hopkinton, to consult with Dr. Bucklin, on the case of a labouring man of a robust habit, and a free drinker; who had eight days previous, fractured the tibia and fibula, about five inches above the ankle, in such a manner, that the end of the fractured tibia exhibited sharp spiculæ of bones, that nearly protruded through the integuments; two days succeeding this casualty, the patient was attacked with spasms in the fractured leg, which became extremely distressing by the motion produced in the spiculated fracture. The spasms increased in violence, and soon became general, exhibiting the true tetanic form. In this way it advanced with painful strides, until this time, six days from the attack. Through all this tumult and uproar, the doctor pressed him hard with his liberal offers of spirit, wine and opium, yet the fits declared their prerogative every five or ten minutes, and were obeyed. All this time he was not able to swallow any thing but liquids, and at the same time, it was impracticable to confine his leg, otherwise than to support it by the hands of assistants through every spasm.

I soon mentioned to the doctor that I had seen some cases where I thought I had experienced good effects from the use of the mineral solution, and therefore I recommended to give it a fair trial in this case, although the continued exciting cause, the points of the bones, pushing themselves into the flesh, was very much against the success of the medicine. I directed a warm bath to be got in readiness without delay, and to immerse him; which was accordingly prepared and done. He remained in the bath twenty minutes, and it required the exertions of a number of men to keep him in the tub at first, but in about ten minutes the spasms mitigated a little, and he sweat very copiously. By the time he was removed from the bath, we had the mixture prepared as in the last case, I gave him a table spoonful, and ordered him to take the same quantity every half hour,

if he did not complain of distress in his stomach, &c. &c. This was eight o'clock in the evening, and the medicine was continued through the night as directed. They discovered no great difference in the symptoms, until two o'clock in the morning, when they took notice that the fits were less frequent, and severe, and about four o'clock he fell asleep, and continued so until eight, except being interrupted occasionally to take the mixture.

I visited him with the Doctor at nine o'clock in the morning. We found him free from pain and spasms, but attended with insatiable thirst. He conversed rationally, though he had no recollection of seeing me the evening before, or of any transac-

tions for several days previous.

We agreed to give the mixture about every hour, only lessening the quantity considerably, or increasing it in case of a renewal of the spasms, and directed an Indian meal poultice to the leg. I was afterwards informed by the Doctor, that he had occasionally some spasms, for three or four days, and that he continued the medicine according to the urgency of the symptoms. On the third day, the Doctor found that his abdomen was considerably tumefied, and that he had a little distress in the bowels.

The tumefaction increased until the fourth day, when a diarrhea took place, and continued for three days, with great profusion of liquid, and indurated stools. Immediately after this discharge commenced from the bowels, the spasms entirely subsided, his thirst abated, his appetite gradually increased, he soon recovered his health, and the fracture united in the usual time.

I would just remark, that the diarrhea was not attended with any gripings, or pain in the bowels, and that the mixture was

wholly laid aside, after the movement of the intestines.

On the 23th of May, 1816, I was again called to Hopkinton, to consult with Doctor Bucklin, on the case of a very hard labouring man, about fifty years old, of an uncommonly athletic constitution, rather also possessing an inclination for ardent spirits; who had been troubled for many years, with an ulcer, about the great toe joint; on examining carefully the case, I found a cariosity of the metatarsal bone of the great toe, and the result of the counsel was to remove the same. I would just notice here, that he had been very much troubled with spasmodic affections, especially in his stomach, for a number of years. The operation was performed, after raising the integuments to cover the wound, by dividing up between the great toe and its fellow, to the upper end of the metatarsal

bone, and then a transverse incision was made to meet it at the articulation of the tarsal and metatarsal bones. The patient expressed great sensibility in the operation, and even exhibited strong spasmodic symptoms, which soon increased, with violence and rapidity. I observed to the Doctor, that I believed we had better have recourse to the old mixture, that was used in the preceding case; accordingly, it was prepared, and directed to be given in the same manner, with the like precautions. Still the tetanic symptoms were general and violent.

I did not see him afterwards, but the Doctor informed me that he attended him closely, and found that the mixture always gave him relief from the spasms, though it did not prevent their

return.

The Doctor also observed, that the patient soon learnt that he was eased by the medicine, and was very solicitous that the dose might be increased, and that the family and nurses indulged him, so that he was unable to ascertain the quantity he took, but had no doubt that he took, at times, double the

quantity that he at first had been ordered.

It gave him no distress in the stomach or head, but he was very thirsty. About the fifth day there appeared a swelling of the bowels, which continued to increase until the eighth day, when a diarrhea commenced, precisely similar to the preceding case, and continued three days; immediately on this expulsion, the spasms left him, and from that time his appetite began to increase, the wound healed as usual, and he now enjoys good health.

Dr. Zadock Howe, my former partner, while residing with me, thought that he experienced the good effects of the mixture, in a severe spasmodic affection of a delicate lady in her second pregnancy. She had been labouring under the fits, for several days previous to his being sent for; but they soon

subsided on giving the medicine.

I have, in several cases of less moment, experienced the antisposmodic powers of this mixture, and have no doubt but the solution was the principal agent, in affording the relief, in the above cases. How far the spirit, and laudanum, were auxiliary, I do not pretend to say; but this much may be premised, that from long experience of many able physicians, they have been united in opinion, that opium and spirit, and the like class of medicines, have been principally relied upon for the mitigation, and cure of tetanus, operating by their tonic power. The mineral solution, by its salutary effects in the fever, and ague, has been also received as a tonic of the first class. Every one, conversant in the practice of medicine, well knows, that

a composition of simples, often has those kind operations on the animal economy, which we cannot find any simple will excite. What simple substance do we find, that will bring about the whole train of agreeable symptoms we so often discover, as from a Dover's or James' powder, or the chalk mixture? A priori, a combination of those tonics may modify the action of one another, and accomplish what either alone would not be capable of doing.

After making these remarks, I submit the facts, hoping they will be found advantageous in the hands of any, who shall be

disposed to adopt the practice.

Franklin, Dec. 1817.

Case of Lepra Arabum, or True Elephantiasis. By ROBERT LEE, M. D. Physician's Assistant, Royal Infirmary, Edinburgh.

[From the Medico Chirurgical Review.]

HE following Case of Lepra Arabum, or True Elephantiasis, has lately come under my observation, in the Royal Infirmary of this place; and as it is a disease which rarely occurs in Britain, I trust that it cannot fail to prove interesting to the profession in general, and in a particular manner to those who have given more than common attention to that extensive and interesting department of medical science, Cutaneous Diseases.

I shall in the first place give a correct description of the present appearance of this singular affection, and then subjoin a brief history of its origin and progress, as collected from the report of the patient himself, who seems possessed

of talents superior to his years.

John Paterson, ætat. 16.—The features are very much swollen and deformed, and on the cheeks, nose, lips, and chin, as low down as the os hyoides, there are hard tuberculated elevations of the cutis. These tubercles on the cheeks and chin are so crowded together, as to form large, irregular, and in some places rather deep seated lumps, and over these are placed a few smaller prominent and rounded tubercles, about the size of a garden pea; the whole presenting an appearance very similar to the rough tuberous elevations occasionally observed in potatoe peel. These masses have an unctuous appearance and feeling, are of a dark brown or dusky colour, but those apparently more superficial are of a lighter and shining complexion, with some small florid blood vessels.

ramifying on their surface. The temples retain their natural aspect, but on the forehead, which is very much wrinkled, there are situated a considerable number of flattened tubercles, varying in size from one to two lines, with general thickenings of the skin. The superciliary ridges are more than usually prominent, and the hairs are few and scattered. The upper eye-lids are thickened and tuberculated, but the cilia remain, and are of their usual appearance. The ears, particularly the lobes, helix, and anti-helix, are enlarged, and occupied by a number of small tubercles. The alæ of the nose are swelled, the nostrils are preternaturally dilated, and the apex of it is entirely covered by a dark, thick, brown scab, as is a portion of the left cheek, where there is an oozing of thin fluid, which forms a light scab of a straw colour. The lips are thick and tender, discharging a thin matter in some parts, while in others scabs are forming. The voice is hoarse and weak, deglutition is painful and difficult, and, on examination, the tongue and inside of the mouth, and internal fauces and velum palati, tonsils, and uvula, are found to be occupied with numerous small white tubercles, with a considerable degree of erysipelatous inflammation of the upper surface of the tongue, roof of the mouth, and soft palate, with ulceration of the latter near the root of the uvula.

In the upper and anterior part of each thigh there is a cluster of enlarged lymphatic glands, forming a moveable, rather soft, prominent swelling; in the left, about the size of a small hen's egg, without any discolouration of the integuments, or

any pain.

The thighs retain their natural form, but they are every where covered with large, irregular, discoloured, scaly patches of a dusky brown or coppery hue, with numerous small apparently subcutaneous tubercles. The legs and feet are greatly enlarged, scaly, and indurated; they are also of a dusky coppery colour, and occupied with tubercles larger and more prominent than those upon the thighs.

The superior extremities are affected in a manner similar to the thighs and legs, but the enlargement is chiefly confined to the wrists and hands; and in the bend of the right arm there is a small tumour, possessed of characters corresponding with

those in the groins.

The parts of the skin thus discoloured and tuberculated are in a great measure devoid of sensibility; and piercing them with a sharp pointed instrument, so as to produce a flow of blood, does not excite the slightest degree of pain; and at no period of the disease does it appear to have been attended with any uneasiness.

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He constantly experiences a sense of constriction across the chest, with pain under the short ribs of the left side, palpitation of the heart on exertion, and slight cough with scanty expectoration. For some weeks past he has been subject to gastrodynia, cardialgia, acid eructations, with great languor, and often with faintness. The abdomen appears slightly tumid, but there is no distinct induration to be felt in any part of it. The swelling of the feet and ankles is increased towards evening, and pits on pressure. Pulse 93; tongue moist; appetite good; bowels rather costive. Urine reported to be high coloured, and deposits a copious lateritious sedi-

He was born in the island of St. Christopher's; his father is a native of the West of Scotland, his mother a white woman, likewise born in that island, and remarkably healthy. From infancy he has been particularly delicate and feeble, so that he has been unable to partake in the amusements of boys of the same age; has been often subject to pain in his back, to loss of appetite, and for a year preceding the present ailment, to weakness of vision. He sailed from the West Indies for Scotland on the 27th of June, 1813, and landed in this country on the 12th of August following.

About six days subsequent to his arrival, both legs began to swell, and the integuments of the right became hard and insensible. At the same time he suffered much from pain in the left side, immediately below the false ribs. Five weeks afterwards, some small pimples, accompanied with itching and tingling, arose about his wrists, which he at first supposed to be the prickly heat (Lichen Tropicus) of the West Indies, to which he had been exceedingly liable while in that

The integuments of the superior extremities, particularly of the wrists and fore arms, now also began to grow thickened and discoloured, while the affection of his legs continued to increase; and above the right ankle, where the cutis had, as he describes it, the feel of leather, an oozing of a fluid took place, which speedily concreted into thin yellowish scabs. In about nine months, the symptoms still increasing, the integuments of his face became affected, a hard tumour having appeared upon the middle of his nose, about the size of a black currant, of a shining red colour, and situated apparently under the skin.

In June, 1815, he had a severe attack of measles, and during the two weeks of his confinement, the tubercle on his

nose almost entirely disappeared. He had not, however, completely recovered, before this tubercle again increased to its former size, and another appeared below the left eye, accompanied with considerable heat, redness, and tenderness of the whole face. In the course of three months, both tubercles having now become elevated, clear, shining, and soft, they opened spontaneously, and discharged a quantity of

bloody ichor.

He continued in this situation without any material change in the symptoms until February 1816, when the skin of the face began to swell and thicken, and numerous flattened tubercles to arise on the cheeks, ears, lips, and chin. From small openings in these tubercles, now gradually increasing in number and size, a copious discharge occurred, which formed thick dark brown scabs over the whole of the face, except the forehead: these scabs soon fell off, and a fresh discharge took place, succeeded also by a similar scabby incrustation.

During last summer, he thinks the discharge from his feet and legs was much increased, and wherever the integuments had the leathery feel, numerous chaps or fissures appeared, which were very itchy, and irritated by the heat of the fire. The general thickening of the skin on his thighs was nearly synchronous with the affection of his ankles. During the last summer also, the discharge from his face was materially increased.

About September and October, however, there was a considerable improvement of all the symptoms. In this apparent amendment, he continued till the commencement of the winter; then the general cutaneous affection became rather worse than before. The discharge from the tubercles on his face, and under the chin, was so much increased as to stain the pillow; an increase of pain was always felt during frosty weather. He is uncertain when his mouth and throat first became covered with eruption, but recollects to have felt hoarseness and pain on deglutition ever since the disease appeared on his face. His general health, until of late, has been good; but six weeks before his admission into the hospital, he observed his urine discoloured and thick, and shortly afterwards felt severe general pains, particularly fixed in the epigastric region, and great debility. Previous to his admission, he has been using, by medical advice, the warm sea water bath, which had no other effect than that of bringing off the scabs from the subjacent small tubercles. These soon produced a fresh crop of dark brown scabs. He has also undergone two courses of mercury, but without any benefit.

He was admitted into the hospital on the 10th instant, and he is at present using mild diaphoretics and calomel, and antimony in small doses, in the form of Plummer's pill, with a moderate allowance of wine and nourishing diet, without any

amelioration of the complaint.

Since the time of his admission into the hospital, the discharge from his face has been abundant, and it is now covered partially with crusts. His health has been declining rapidly, and for some days he has been much afflicted with the pain in his left side, with frequent attacks of hard, dry cough; while he perspires profusely under night, and the ædema of the lower extremities towards evening ascends as high as the knees. His pulse has generally been betwixt 90 and 100, and his urine is almost white like milk, and deposits a copious sediment of the same colour.

The organs of generation appear to be nearly in the same condition as they are usually observed to be in boys before the age of puberty, with the exception of the scrotum, which, though nearly empty, is considerably larger. The testicles are small and soft, and are situated high up, near the external abdominal aperture. He reports that they have diminished nearly one half in size, and are still becoming smaller. There are no hairs on the pubis or chin. The prepuce is covered both on the inner and outer surface with tubercles, and is so much contracted that the glans cannot be completely uncovered.

The disease, in this case, does not appear to be infectious, as this boy has slept in the same bed with his brother during the whole period that he has been affected with the complaint, and in him none of the symptoms have occurred.

ROBERT LEE, M. D.

Edinburgh, March 24, 1817.

Urinary calculus removed by mechanical means.

HE following case is taken from a paper on the arts of India, by Dr. Scott, in Brande's Quarterly Journal. It is impossible to say what might be the effect of perseverance and dexterity in a patient operating on himself, in a case so important to him as this. The result will not seem altogether improbable, when it is recollected that the removal of only two or three grains per day, would, in a year, obliterate a calculus of two ounces.

"I may take notice here of a case of stone in the bladder (it cannot be too often mentioned) which was remarkable for the singular mode of cure adopted by Colonel Martine, himself, the sufferer. He then resided at Lucknow, but I believe the Colonel had lived in many of the northern parts of Hindostan. I knew well a surgeon* of the Company's service, who was intimate with the Colonel, and visited him at all hours, and often saw him carrying on his process for cure. It consisted in reducing the stone to powder, by a fine saw introduced through the urethra by means of a canula, and he perfectly succeeded in removing the whole of it. The Colonel was an ingenious mechanic. His saw was made of the steel spring of a watch. He introduced the canula until it touched the stone, and then, by changing the position of his body he pushed on the saw till it was, for a little way, in contact with the stone, and then moving it backwards and forwards, he reduced it to powder. My friend often saw him at this work, and occasionally more than once on the same day. The operation gave him no pain whatever, for soft parts, plentifully covered with mucus, are under very different circumstances from hard and resisting bodies, and completely elude the teeth of so fine a saw. Soon after every sawing, he passed with his urine a quantity of the stone in the form of a powder. Although a parallel case will not often occur, where the patient is so intelligent and ingenious, and the final success so decisive, yet by long babit and guided by feelings known only to the individual, I should hope that a similar mode might sometimes be applied with advantage. No surgeon can effect this for another per-To place the stone and the saw in the proper positions, and to carry on the operation with success and without pain or injury, can only be done by the patient himself. The hopes of relief, the attentions and the observations necessary to attain it, the repeated trials, with all the sources of employment and of comfort to a miserable man, may well reward him, even if the perfect success of Colonel Martine should be unattainable.+

* Mr. Bright.

[†] Since writing the above I have conversed with a very intelligent officer of high rank, who knew the Colonel intimately. He tells me, that the instrument for reducing the stone to powder was rather a file than a saw, and that it was fixed to the end of a piece of whalebone. It was passed into the bladder through a canula. So accurately from habit could the Colonel judge of every circumstance, that he could tell when any part of the surface of the stone became more elevated than the rest, and could remove that part with the greatest nicety. On speaking to a friend now in town, who also was intimate with the Colonel, he was told, that the filing part of the instrument was made of a knitting needle, properly tempered for the purpose.

REVIEW.

Commentaries on the Treatment of the Venereal Disease, particularly in its exasperated state; including a second edition of a former publication on that subject, &c. &c. With an Appendix on Strictures of the Urethra; and on Morbid retention of Urine. By Edward Geoghegan, Member of the Royal College of Surgeons in Ireland, &c. &c. London, printed for J. Callow, and Gilbert and Hodges, Dublin.

THE subject of the first commentary in this volume, is the nature and treatment of phymosis, accompanied by inflammation and mortification. It appears that the author's attention had been, for some time anterior to 1799, directed to the inflammatory stage of phymosis. The number and character of the cases which occurred that year, particularly excited his astonishment, and confirmed in his mind the opinions he had formed, relative to their nature and treatment. He was led with increased confidence to question the propriety of the

practice recommended, and generally pursued.

The inflammation attending the phymosis described by Mr. Geoghegan, was erysipelatous, and was evidently epidemic. The mode of treatment which proved most successful, went far to show, that the malignancy of the complaint was rather to be referred to the peculiar state of the weather, during which it was prevalent, than to any unusual violence in the infectious matter. For five months, viz. from the 27th of June to the 27th of November, there were but eight days in which it did not rain. During this period, all classes of diseases exhibited uncommon violence in their symptoms. In the venereal, this circumstance was peculiarly unfortunate. The specific, mercury, was used in great quantities, to overcome the excessive virulence of chancres, and when phymosis manifested itself, instead of attempting its cure by those depleting plans, which were most successful in curing other inflammatory affections of that period, it was but too common to resort to remedies, which

directly tended to hurry on the mortification, they were designed to prevent or cure. The author, it seems, was early led to search for a cause of the increased malignity in something beyond the acrimony of the virus, or extreme debility; and adopted a course of treatment conformable to his pathological views. He depleted freely, and found this method abundantly successful. He does not pretend to say, that cases may not occur, in which it would be proper to attempt at once to invigorate the system. Such cases, however, did not happen to him, and he does not hesitate to say, while remarking that the antiphlogistic plan was generally indicated, during that season in particular, "I believe that it is so in most instances in the symptoms in question." Before a more particular detail is offered of the treatment of phymosis recommended in this work, some notice will be taken of the speculations and

facts, contained in this commentary.

In an early part of this commentary, the author inquires, "when the ordinary symptoms of an infectious disease appear to be exasperated in an unusual degree; the question arises, to what are we to attribute this increased degree? whether to increased acrimony of the poison, or to any adventitious or physical causes, insensibly operating; this is the pivot, upon which the point of practice must turn. If to the former, mercury is the remedy; but if to the latter, many and various circumstances are to be taken into consideration, which are too frequently overlooked. There is nothing more common than to attribute those venereal appearances, which resist the effects of mercury, or are increased whilst it is administered, to an original morbid condition of the habit, and the plan of treatment is the administration of bark, opium, wine, to which mercury is conjoined by some. Decoctions of the woods, and sea bathing, are also very much used, and these means are recommended by authors, and very generally pursued in a kind of routine, as if they had a specific operation in all diseases which had a venereal origin." p. 21.

The reader will pretty readily discover the author, to whom these remarks are more particularly directed, and their application is so evident, that it hardly seemed necessary for Mr. Geoghegan to have made the more direct reference to the opinions and practice of Mr. Hunter in phymosis, which immediately follows the quotation. It is true Mr. Hunter does not satisfy us, that, in every case, the treatment recommended in his work is the best. It is evident that he was not perfectly satisfied himself on the subject, and appeals to general principles for the rule of practice, where his experience has been

deficient. It will perhaps be more correct to say, that the exceptions to his treatment, which anomalous cases occasionally presented, were never permitted by Mr. Hunter to overthrow a well established principle. In this view, the practice recommended by him in phymosis, and animadverted upon by the author of these commentaries, though not positive in its recommendations, is certainly not contradictory. And if experience have decided against the use of mercury, during violent inflammation of the prepuce, it should not be forgotten that Mr. Hunter appears "inclined" to recommend it, from a regard to those general principles, which a very extensive observation of the venereal disease had satisfied him were correct.

The points to which the author of these commentaries has more particularly confined himself, are, whether the exasperated forms of the venereal are to be attributed to an acrimony of the virus, to mere peculiarity of constitution, or to the various external circumstances which operate on the body, more or less at all times, and which occasionally exert a decided influence

over disease.

Are the aggravated symptoms of the venereal disease, to be attributed in any degree to increased acrimony of the virus? The facts which furnish a negative answer to this inquiry, are the effects usually attendant on the application of the poison in the first instance; and those which are occasionally observed to follow, when applied to different individuals by the same "When applied to a non-secreting surface, ulceration is the consequence, and although this state is accompanied by some degree of inflammation, yet it is rather circumscribed, and the ulcerative powers goes on more rapidly than the inflammatory, and the latter is often totally absent. The same virus will, in different persons, produce the simplest and most aggravated forms of the disease. Taken into the stomach the poison produces no effect, and even proves harmless to many persons who expose themselves to it; it also remains in the habit for years, without manifesting itself, or exciting the least disturbance." If acrimony have no agency in the production of aggravated symptoms, to what are they to be attributed?

"It is a common phrase," remarks the author, "when things run untowardly, to say this is owing to peculiarity of constitution; but in what this peculiarity consists we are uninformed, and of course, are without any guide as to the treatment. Whilst I agree that the true source of the mischief is in the state of the constitution, I cannot but express my astonishment at the narrow view that is generally taken of this very material point; one would think, from the plans laid down, and usually

followed, that this condition of body meant something fixed and definite, not that fluctuating state which is liable to vary with every breeze." In connexion with the above quotation, facts are adduced, to show the dependance of aggravated forms of disease in general, on the operation of certain external causes, such as peculiar seasons, habits of life, &c. &c. The same reasoning is applied to the venereal disease, and an aftempt made to prove that its exasperated forms are not the effects of acrimony, nor owing to an original peculiarity, by which the powers of mercury are lessened, or rendered injurious. violence and frequency with which syphilis now and then appears, have no other connexion with the virus than this, that its application to an irritable organ, during an epidemic season, has predisposed that organ to be acted upon by epidemic causes. This the author thinks is proved by the fact, that such increase of symptoms is most remarkable, when the system has been brought fully under the influence of mercury and the ulcers nearly healed. "These observations," he remarks, "apply to every form and stage of the disease, all which may be aggravated under similar circumstances; and I hold it, that violent tumefaction of the penis is always produced in this way, namely, by external causes, and sometimes accompanied

by the deleterious properties of mercury."

Besides the more general causes now me

Besides the more general causes now mentioned, which, by their effects on the constitution, or general system, may tend to increase the violence of the symptoms of syphilis, local irritation has, in the opinion of Mr. Geoghegan, a great share in producing these attacks. This may be induced by the friction of the clothes against the diseased organ, and very much increased by exercise. Rest, and a well applied bandage, will prevent increased disease from the above causes. An increased irritation will frequently be produced by excesses in high seasoned food, or stimulating drinks. Abstinence from these should therefore be carefully practised in all cases, but more especially in irritable habits, or during periods in which an aggravation of venereal symptoms is unusually frequent. It is by no means an uncommon practice, from the commencement of chancre, to make use of various dressings, with a view to its speedy cure. is more common, however, to resort to these local applications, when the ulcer is nearly healed, while a small sore only remains, and proves obstinate. In 1799, a case of this kind occurred in a very irritable habit, and the particulars of it were communicated to the author. The ung. œruginis was applied to the part, inflammation occurred, the quantity of mercury was increased, mortification took place, and notwithstanding the substitution of

calcined mercury, for the preparation previously used, and the liberal use of bark, opium, cicuta, &c, the disease proved fatal. This was not a solitary case. Excess of any kind, irritating applications, exposure, &c., were very frequently followed by tumefaction of the penis, and when the mercury was continued, or the bark, opium, &c. given, a remarkable destruction of parts was the speedy consequence. In one case, sphacelus set in in thirty-six hours after the inflammation, though the case had been attacked by a powerfully invigorating treatment, wine, &c.

If it now be asked, to what the exasperated forms of the venereal disease are to be attributed, we may answer, to peculiarity of constitution, to some epidemic cause, to the unwholesomeness of the air in the residence of patients, to local irritation, and particularly to the increased use of mercury, under these unfavourable circumstances. These appear to be the leading views in the commentary under review, and the principal object of the author seems to be, to reduce the pathology and treatment of the venereal disease, to the same general principles which govern us in other morbid affections. been contended for by some, as peculiarity of constitution, and which has been looked to as the modifying cause of some of the extreme appearances, or symptoms of this affection, he appears to consider as the effects of causes foreign to the body, the operation of which is discovered to us by the alteration, and especially by the increase of the local symptoms of this, and other diseases. Seasons of the year, habits of life, effects of passions, local irritation, place of residence, &c. are among these causes.

Although these circumstances have an undoubted influence in modifying and exasperating local symptoms, and in rendering the specific action of mercury not only useless, but dangerous, we should, perhaps, be hardly safe in attributing to them all the anomalous, or violent cases that are occasionally to be met The author, it is true, has enumerated peculiarity of constitution among these, but from the manner in which this phrase is quoted in another place, it is pretty evident he does not understand by it, exactly what those who first employed the terms meant to convey. It would appear to be, with him an accidental state of the system, rather than a fixed and definite peculiarity, and dependant on existing circumstances, instead of being constitutional. It is however a matter of common observation, that the same virus produces very different forms and degrees of disease, in different individuals, and in those too, of nearly the same age, engaged in similar pursuits, apparently equally healthy, and in whom a scrophulous taint has

never been suspected. In one of these cases, we find the venereal ulcer well defined; the parts in its neighborhood retaining their natural colour and sensibility; the applications used with a view to the speedy cure of the sore, acting mildly, and with evident good effects; and the specific, if employed, facilitating the cure, with but a slight effect on the constitution. In another, all these circumstances are reversed, and we are called upon to observe, and treat from the beginning, an ulcer, accompanied with uncommon local inflammation, and a constition highly disturbed with the action of the specific, however judiciously employed. There would appear, from cases like these, that there was something like a fixed, definite peculiarity of constitution, favouring in one instance the restoration of parts, from disease to health, under a specific treatment; and in the other, produced by similar causes, embarrassing the case with aggravated, and in some instances, novel symptoms. So remarkably modified by it, were numerous cases which occurred under the observation of Mr. Hunter, that he was inclined to believe, that new diseases were springing up, and his elaborate commentator, Dr. Adams, supports the same idea. It is, however, doubtful, if such forms of the disease can be more rationally accounted for, than by a reference of them to some peculiarity of constitution, whether scrophulous or not; and to this may be superadded, an epidemic cause, local irritation, modes of life, &c. &c.

In the commentary on the treatment of phymosis, the author first takes a rapid view of the contents of the preceding one. He shows that the inflammation is not a necessary attendant on chancre. That chancre is occasionally an effect of gonorrhæa, and curable without mercury; and again notices the circumstances which tend to excite it, and shows, that as the phymosis is an accessory disease, "every fundamental principle of the ars medendi establishes it, that this new disease is first to be attended to." Is mercury to be continued in the treatment of phymosis? All that is known of the effects of mercury, whether constitutional or local, in the mind of the author, is against its use. duces," says Mr. Hunter, "universal irritability, making the constitution more susceptible of all impressions; it quickens the pulse, also increases its hardness, producing a kind of temporary fever; but in many instances it exceeds this, acting as it were a poison," The same writer elsewhere remarks on the constitutional disagreement of mercury, and the symptoms of general irritation and hectic, it may then induce. " A moment's consideration," says Mr. Geoghegan, "as to the effects of mercury, when the habit is impregnated with it, will convince

us, that the worst consequences are to be dreaded from its use in active inflammation of parts of loose texture, and disposed to sphacelate rather suddenly from any extraordinary excitement." The constitutional treatment of phymosis should be perfectly antiphlogistic, and more especially should it be so in the commencement of the disease. General bleeding is preferable, if loss of blood be indicated, in this, as in all other inflammations rising spontaneously, to the application of leeches, cupping, &c. "If the symptoms run high," remarks the author, "I take off a pound of blood at the onset, when there is no contra-indication, and I never find it necessary to repeat it; if the symptoms are moderate, I omit bleeding, and direct brisk purging in the day, and at night, two grains of antimonial powder, and one grain of opium, in a pill, which latter I repeat after six hours, if the distress continues. The tongue is generally furred, skin hot, and pulse frequent; a state that forbids every medicine of the astringent kind, and I think opium also, unless its use is preceded by evacuations, and it is combined with antimonials, or ipecacuanha, in the proportion before mentioned."

The local treatment should be extremely mild. As the inflammation of the prepuce is by no means the necessary consequence of chancre, and does not depend at all on the virus as its cause, the local application of mercury is useless, and may be injurious. The author of these commentaries has seen phymosis produced by a solution of corrosive sublimate, used for the destruction of warts. In place of this, and other lotions, and injections for the prepuce, the ointment of acetate of lead is recommended. This answers all the purposes of a local dressing. Mr. Bell recommends leeches, for the removal of the inflammation of the prepuce. Their application is not always safe. In irritable habits, increased irritation has followed the bites of these animals, and in one case mentioned in this work. mortification occurred, at the places where they had been applied, and extended over the penis. During phymosis, the patient is to be confined to his bed, that the diseased organ may be carefully supported. "It should not be up to the belly, as Celsus directs, this situation is unfavourable to to the free exit of the discharge, and distorts the part in some degree; it should be merely not pendulous." In operations on the prepuce, we should have some regard to its structure, "it is composed of a double portion of skin, and hangs so loosely as to admit of great distention; a cut through it divides not only a double portion of skin, but considerable more on account of its laxity and corrugations, hence the wound must present a surother of the same extent and of dissimilar structure; we should be guided then by this circumstance, in conducting the operation." "The skin should be drawn tight by an assistant, towards the pubis and circularly, and not cut in a lax state; in this way, less of it will be exposed to the knife, than if it lay loose, or was stretched downwards, and the wounded surface will be small; by this method, sores of this description will heal kindly, provided that mercury is not administered, or that the patient is not confined in a hospital." Chronic phymosis may be overcome by relaxing fomentations to the part, and daily

attempts to push back the prepuce.

Paraphymosis. The treatment usually recommended for this affection of the prepuce, consists in endeavouring to push back the glans with the thumbs, whilst with the fingers of both hands, the prepuce is drawn forward. The author objects to this method, and supports his objection on the simple ground, that the glans retains its natural situation, during the displacement of the prepuce. The base of the glans is increased in size, by pushing it back, and the difficulty of reduction increas-The best method of reducing the prepuce, therefore, consists in application of such a pressure as will diminish the glans. To do this, it is merely necessary "to lay hold of the glans with the fingers and thumb of the right hand, as one would hold a writing pen, and gently to compress it around its base, inclining it rather forward than backward, with a view to rendering it small, and having lessened it, then, and then only, the left hand is to be applied to draw forward the prepuce. If the symptoms are violent, a complete division of the prepuce on each side should be made, and when the parts have become flaccid, it should be restored to its natural situation.

Phagedenic Chancre. "This description of sore is characterized by the successive formation of sloughs, so as to destroy the part on which it is situated." Mr. Hunter, in the first section of the fifth chapter on chancre, treats of this disease. "The ulceration on the inside of the prepuce," he remarks, "will sometimes increase, and run between the skin and body of the penis, and eat holes through in different places, till the whole is reduced to a number of ragged sores." These are the burrowing sores of Mr Geoghegan, and which he considers as partaking of the nature of phagedenic. "When phagedenic, or a burrowing sore is an early symptom, it is almost invariably accompanied by quick pulse, dry skin, furred tongue, and great pain." These symptoms should be particularly attended to,

when they coexist with phagedena, they strongly indicate disorder in the functions of the chylopoietic viscera, and it is highly probable that the species of ulcer under consideration are the

consequences of this visceral derangement.

There is some diversity of opinion with regard to the nature of these ulcers. Some teach that they are venereal, and recommend even an increased quantity of mercury for their cure. Others have attributed them to unusual acrimony of the virus, and direct a full mercurial course. Mr. Hunter is not very precise on the subject. He tells us "they seldom or never happen but when the inflammation has been violent, which violence arises more from the nature of the parts than the disease, and therefore belongs to the nature of the parts or constitution than to the disease. However, I can conceive it may also take place where the inflammation has not been violent." From the closing sentence in this quotation, one might be led to suppose that Mr. Hunter favours the venereal origin of these sores, and of their being the direct consequences of simple chancre. This however would by no means be the inference from the whole section, and he would seem to have intended to have prevented such inference from the title of the section, which is "of Dispositions to new diseases during the cure of Chancres." That he questioned their venereal nature is more especially to be presumed from the treatment he recommends. principally in the use of those various diet drinks, into whose composition Sarsaparilla largely enters. Mr. Abernethy says decidedly that the burrowing sores, which partake of the nature of phagedena are not venereal, the author of this work agrees with him to a limited extent, viz. "that they are not perpetuated by the venereal poison, and that they are aggravated by mercury, and may be produced by it; still they often have a venereal origin, and are to be considered as accessary diseases." That though they recover without the use of mercury, and are exasperated by it, still decided symptoms of the venereal may appear after these sores have healed, which will require the use of mercury for their removal.

In the treatment of these sores, especially if accompanied with the furred tongue, quick pulse, &c. already mentioned, the digestive organs claim the first regard, purgatives should be given till these symptoms disappear, and afterwards the anodyne and sudorific remedies, recommended in Phymosis, should be employed. If the distress of the patient be excessive in the early stage, blood letting will be proper, and for the more advanced stages, warm bathing, and a soothing course should be adopted. For the cure of the disease, the decoction of

Sarsaparilla in large doses, is strongly recommended. The author's formula is three ounces of this medicine, to two pounds of water. One pound each day is to be taken for a week, and the quantity increased gradually to near three pounds a day. If local remedies be used they should be of the least irritating kind. The fermenting poultice, unless it distress by its weight, may be applied over the whole diseased organ with advantage. In chronic cases a removal to a dry and warm atmosphere has been found beneficial, and Mr. Hunter tells us, that in a case which resisted every kind of treatment, the patient at last employed sea bathing and got well. During the whole course of treatment, especially while phagedena exists, the utmost attention to rest should be enjoined. When the exasperated symptoms have subsided, the mercurial treatment is not to be recommended; and even when perfectly healed, if the habit be irritable, this should not be employed unless unequivocal secondary venereal symptoms appear. "In some instances," says the author, "the disease never returned, which I attributed to the removal of the virus in limine, by the sloughing."

Venereal Bubo.—In this commentary, no notice is taken of the ordinary symptoms of bubo, its immediate objects are contained in the following quotation. "I shall suppose that suppuration has taken place, and the matter evacuated, the discharge becomes ichorous, the edges ragged, and the ulcer spreads, and sometimes becomes gangrenous, accompanied with quick pulse, hot, dry skin, and great anxiety; in other instances, the edges become callous, and are tucked in, sometimes having corresponding sinuses; in some cases they exhibit the character of herpes exedens, and extend to the ileum, and downwards to the verge of the anus." A number of interesting cases are related in this commentary, from which the above symptoms have been collected. All these instances furnish abundant testimony against the continued use of mercury in this aggravated form of the venereal disease. In all of them, the symptoms were strikingly exasperated by its use, and a recurrence to this remedy, in that mitigation of symptoms, which took place during its disuse, was invariably followed by a speedy change for the worse. It would be needless to attempt an abstract of these cases. The following paragraph from the work, contains the author's view of their proper treatment, and the coincidences of his opinions with those of long established authorities.

"The important question arising from what has been premised, is, ought we, in cases of bubo, to depart from the course of treatment usually pursued? certainly we ought. Mr. Hunter

says bubo is undoubtedly a local complaint; Mr. Abernethy says, that it is not syphilitic when not preceded by chancre; it has often occurred accompanied by ulcers on the penis, phymosis, without a venereal origin; its nature therefore must be frequently doubtful, and we have abundant proof, that when it has been produced by the venereal poison, mercury, the antidote to this poison, aggravates it, although it relieves, and cures every symptom, showing itself elsewhere. This is experience, profiting by which, I would recommend that the use of mercury be abstained from, in every case of bubo accompanied by much inflammation, or a scrophulous habit, and unaccompanied by proof of the habit being infected. The consequences of attending to this practice will be, that dormant scrophula will never be unnecessarily aroused, which often happens from the abuse of mercury, and that the true nature of the complaint will appear .-- Mr. Abernethy's experience has induced him earnestly to recommend delay in doubtful cases. Hunter observes, "that recent venereal complaints are generally more difficult of cure than the symptoms of lues venerea, and that it is nearly as dangerous to give mercury, in some constitutions, when the disease is not venereal, as to omit it in other cases which are really syphilitic, and that many of the constitutions which put on some of the venereal symptoms when the disease is not really present, are those with which mercury seldom agrees and commonly does harm." Such is a short abstract of opinions and remarks, which are less novel, than attended to in practice. They are particularly interesting to the young practitioner, to whom venereal cases are perhaps most frequently entrusted, and who hardly dreams of the deleterious effects of the remedy, when anxiously bent on the cure of the disease.

The local treatment of suppurated bubo according to the author should be simple, "my experience inclines me to advise, that it be suffered to burst in general, unless that great pain is occasioned by tense skin, in which case an opening is advisable to be made by art, and I prefer caustic to the lancet." "In ordinary cases, every purpose is answered by the constant application of a poultice; in the spreading ulcer, one prepared of oatmeal and beer is often of great service." When the edges become callous and tucked in, and the sore stationary, an ointment made of two scruples of Hyd. Nit. Rub. to an ounce of simple ointment will often be found serviceable; and for herpetic ulcers a composition of one part of ung. æruginis to twelve of simple ointment may be used with great advantage. "On the whole, the treatment pursued in phagedenic chancre is adapted to bubo, when it exhibits the same appearance." It appears that

Mr. John Pearson, expressed to the author, his perfect concurrence with him, on the propriety of abstaining from mercury, in very irritable or scrophulous habits, when labouring under bubo, unaccompanied by symptoms of the constitution being infected.

Ulceration of the Fauces.—Particular attention should be paid to a spreading ulcer in the fauces, as it occasionally involves great destruction of the neighbouring organs, viz. of the uvula, and the bones of the palate and the nose. There will be some difficulty experienced during a mercurial course, in deciding if the ulcer be the consequence of this remedy or of the venereal disease. "I can conceive," says the author, "that the mercurial action may prevail to day in the throat, and cease after some days, and then the venereal action take possession of the part; because the medicine and the disease have a manifest tendency to show themselves in this particular place."

In the first section of the second chapter on lues venerea, Mr. Hunter has given an admirable description of the venereal ulcer of the fauces, and in another part of the work, he mentions, less distinctly however, the symptoms of the mercurial ulcer of the same part. These should be carefully studied, in order that at the first appearance of these ulcerations, their nature may as clearly as possible be understood. In the work under analysis, the attention of the reader is rather called to the treatment, than to a particular description of the disease, and the following quotation furnishes the general views of the author on that subject.

"As the consequence of ulcers of these parts spreading, is deplorable in the extreme, the most speedy means of healing them should be resorted to; and it is to be regretted that our most respectable authorities have afforded so little assistance in this respect. The entire stress is laid on the constitutional treatment, which, notwithstanding it shall be conducted with judgment, still it is too slow in its operation to arrest the progress of the ulceration in these delicate parts; and when mercury is used in large quantities, the palate, &c. seldom escape being destroyed, even when true syphilis prevails. Therefore, when the use of mercury is advisable, it ought to be regulated so as to produce a gentle effect." It should be recollected that the author has reference more particularly to the exasperated forms of ulceration of the fauces, and which call for the use of such means, as will in the shortest time arrest the progress of the disease, whether occurring under a full course of mercury, or suddenly and violently, after this course has been abandoned, in consequence of the disappearance of the primary symptoms. The constitutional treatment, is to be regulated

upon general principles. Any marked disturbance in the digestive functions, is to be relieved by appropriate remedies. The local disease however claims particular attention, and for this a remedy is suggested, which appears to have been very useful. Instead of using medicated gargles and injections for the throat, the author recommends a lotion, which is to be drawn up the nose, until it arrives at the pharynx. "In this way the entire arch is cleansed, and the application comes in contact with the ulcer at every point, the same membrane lining the nose and pharynx. When the sore is venereal, I order two grains of the corrosive muriate of mercury, dissolved in seven ounces of water and one of mell. Rosæ, to be used twice or thrice a day; and when it is not venereal, this is an useful application, provided that there is no inflammation, which is generally the case." By this course, he remarks that he has succeeded in preventing the loss of the uvula and palate, in several cases that threatened this truly distressing event. This mode of treatment receives some support, although not adverted to in the work, from a remark of Mr. Hunter on the internal use of the muriate of mercury in these cases. "It would appear," says Mr. Hunter, third section, second chapter on lues, "that it (corrosive sublimate) removes ulcers in the mouth, as soon, if not sooner, than any of the other preparations; but this, I suspect, arises from its application to these parts in its passage to the stomach, acting upon them locally as a gargle." The author of the commentary opposes its internal use, during the exasperated disease in question, but secures to his patient the same beneficial local effects, as swallowing the muriate would produce, by having it drawn through the nose, and then ejected from the mouth. After the abatement of the violent symptoms (it is perhaps safer to say the cure) by this, and such means as tend to restore health to the general system, the indications for a further use of the specific must be looked for in the occurrence of subsequent secondary symptoms of lues. The last commentary in this volume, contains some general remarks, "on the use of mercury, so as to insure its successful effects." The ill success that has attended the use of this specific, arises from the nature of this means of cure, from the fault of the patient, and from want of skill in the practitioner. Mercury in some cases exasperates the symptoms of the venereal disease, and in some constitutions it assits in inducing accessory diseases; the patient himself very often considers syphilis rather as an inconvenience, than a disease, and abstains only from those imprudencies, in excesses, which he is incapable of indulging, and finally the practitioner too frequently, makes the violence of symptoms, the measure of the mercurial

course, and regards violent inflammation of the affected organs, as much the direct effect of the virus, as genuine chancre. such, or similar views as these, the author grounds the cautions contained in this commentary. Where the patient will not submit to rest, to abstinence, and to vacancy of amusements and habitual pursuits, he advises that delay should be practised in the employment of mercury, instead of that immediate recourse to it, which is more commonly recommended, on the first appearance of ulceration after venereal concourse. That there will be no danger, from such delay, is argued, from what is known of the true nature of genuine chancre, viz. "that the character of the matter of infection is, not to exceed a limited distance, and to be rather circumscribed in its action," and farther from a belief founded on experience that the antiphlogistic treatment, is among the best means of putting a stop to the spreading ulcer, whether it occur in early or remote cases of This reasoning is extended so far, as even to suggest, and to recommend, that where patients will not submit to any restraint, the chances of recovery from what is thought pure chancre, are far better with a mild ablution of the sore, without any mercury, than by hazarding the consequences of mercurial action under circumstances so unfavourable. In a limited extent this may be true, but it is too notorious, for the author to be ignorant of the fact, that cases occur every day, in all sorts of habits, liable to, and experiencing all kinds of exposure, and yet who do very well, and recover, under judicious courses of mercury. It must not however be concealed that occasionally highly exasperated symptoms discover themselves in some cases of this kind, and now and then lead rapidly to most deplorable consequences. The cautions recommended are therefore very proper, though the extremes to which they are carried, seem to be owing rather to a passing remembrance of what the author witnessed in 1799, than to the occurrences of every day practice.

In an appendix to this volume, something is said on stricture of the urethra, and on morbid retention of urine. In the first of these complaints the author has observed excellent effects from the use of the gum elastic catheter, in dilating the stricture, and recommends it as far preferable to the bougie. It must be worn constantly, and the patient strictly confined to his house. In the second, after premising bleeding, purging, warm bath, and opium, it is advised that a catheter of the smallest size, without a wire, be passed to the stricture, and retained in close contact with it. It will be very frequently found, that on removing the instrument the urine will flow freely.

Such is an analysis of a work, which contains fewer striking novelties, than sensible and useful practical views. It is valuable for its details of facts, and for its suggestions, and rules for treatment. There is not always as much deference to established authority as is now claimed from authors, and the size of the volume did not allow the writer to furnish the whole of some views, on which he animadverts. One of the effects should be to excite examination on the part of the reader, who has but a slight knowledge of the works referred to; -such, vis. as those of Mr. Hunter, Mr. Abernethy, Howard, &c .- Mr. Benjamin Bell, furnishes the best texts for animadversion, and as his is the most popular, or common book on syphilis, it is well that his erroneous notions are more distinctly noticed. There is one effect which this work may produce, which deserves notice. In the young and timid practitioner, it may occasion an injurious apprehension of the uses of mercury, and occasion him to defer its use, while syphilis is rapidly advancing, or employ it in quantities too small to eradicate the disease. The works of Hunter, of Howard and Bell however, will assist to remove his doubts, and embolden his practice, while those of Abernethy, Alley and Mathias, with this of Mr. Geoghegan, will furnish the best limits of caution.

American Medical Botany, being a collection of the native medicinal plants of the United States, containing their Botanical History and Chemical Analysis, and Properties and uses in Medicine, Diet and the Arts. With coloured Engravings. By Jacob Bigelow, M. D. Rumford professor and lecturer on Materia Medica and Botany in Harvard University. Vol. I. Part I. Boston, published by Cummings and Hilliard.

The author announces his intention to offer the public a series of coloured engravings of such native plants as deserve the notice of medical practitioners, on account of their active properties. This design further embraces such vegetable species, as are particularly useful in the arts, and in diet; also poisonous plants which must be known, that they may be avoided. Of these various and interesting objects of inquiry, the botanical history is first given, then the result of the author's chemical analysis of their constituent parts, and lastly, their medicinal history.

A work of this character cannot fail to excite the attention of those who are at all interested in the progress of science in America. Works of the kind are among the means of national distinction, and in this view they have a strong and decided claim, not only on those who cultivate science, but also on those who are desirous that the country shall find its respectability in its own resources.

A further source of interest is found in the variety of information which such a publication is calculated to contain. To the exclusive botanist, it furnishes correct delineations, and minute botanical histories. It is calculated to advance vegetable chemistry; while it brings to view the true character of plants considered medicinal, and furnishes to physicians the

best means of distinguishing and identifying them.

In opening the American Medical Botany, the attention is first attracted by the beautiful engravings it contains. These are not merely coloured drawings, shaded by the lines of the graver, but costly and finished paintings of the objects which The author seems to have aimed at givthe work describes. ing true representations of plants as they are, such a view of them as they naturally offer, while under examination, rather than a display which the imagination might have assisted him in making. In the letter-press we have next an account of the localities of the plants described, with some notice of their habits, and a full botanical description of each. We have then a description of their properties, their chemical constituents, their application and use in disease, collected from the author's own trials, and the testimony of respectable medical practitioners and writers.

The first half of Vol. I., which is published, contains the

following articles:-

Datura Stramonium,
Eupatorium perfoliatum,
Phytolacca decandra,
Arum triphyllum,
Coptis trifolia,
Arbutus uva ursi,
Sanguinaria Canadensis,
Geranium maculatum,
Triosteum perfoliatum,
Rhus vernix,

Thorn Apple.
Thorough wort.
Poke.

Dragon root.
Gold thread.
Bearberry.
Blood root.
Cranesbill.
Fever root.
Poison sumach.

We insert one of these articles, as a specimen of the work.

" Datura Stramonium. Thorn Apple.

"The Datura Stramonium is a wandering annual plant, which follows the progress of cultivation, and is rarely found remote

Atlantic coast from Maine to the Floridas, and is also found in the Western States in the neighbourhood of settlements. Its favourite haunts are the borders of fields and road-sides, among rubbish and in neglected spots of rich ground. It emigrates with great facility, and often springs up in the ballast of ships, and in earth carried from one country to another. This circumstance in Europe has undeservedly given rise to the opinion, that it is originally an American plant. Its native country, however, is doubtful, from the want of authentic descriptions of sufficient antiquity. One of the oldest satisfactory accounts of it is that of Gerarde in 1597, who has published a description and figure of this plant, and states that it was introduced into England by himself, from seeds received from Constantinople.

"Its common name in Europe, derived from the form of its fruit, is Thorn apple. In this country its provincial names are Apple of Peru, Devil's apple, and Jamestown weed. It is a plant of rank growth and luxuriant foliage, varying in height from one to six feet, according to the soil in which it grows. In Carolina it begins to flower in May, and in Massachusetts about the latter part of July, and continues until the arrival of

frosts.

"The Datura Stramonium belongs to the first order of the fifth class in the Linnæan artificial arrangement. In its natural order it is found among the Luridæ of Linnæus and the Solaneæ of Jussieu. The following are the essential marks which characterize the genus Datura. The corolla funnel form and plaited. The calyx tubular, angular and deciduous. The capsule four valved.—Under this genus are comprehended a number of species, a great part of which are natives of warm latitudes. The species Stramonium is distinguished from the rest by the following character. Capsules thorny, erect, ovate; leaves ovate, angular, smooth. - A more particular description of the plant is as follows. Stem erect, simple at bottom, much branched at top by repeated forks, smooth or slightly pubescent, hollow in the large plants, often solid in small ones. Leaves given off from the forks of the stem, five or six inches long, acute, irregularly sinuated and toothed, with large acute teeth and round sinuses, the sides of the base extending unequally down the petiole. Flowers single, axillary, on short stalks, erect or nodding. Calyx composed of one leaf, tubular, with five angles and five teeth, decidnous by breaking off from its base. Corolla funnel shaped with a long tube, five angled, its margin waved and folded, and terminating in five acuminate teeth.

Stamens growing to the tube by their filaments, with oblong erect anthers. Germ superior, hairy with the rudiments of spines, ovate; style as long as the stamens; stigma obtuse, parted at base. Capsule ovate, fleshy, covered with thorns, four valved, four celled, opening at top. Seeds numerous, reniform, black, attached to a longitudinal receptacle, which

occupies the centre of each cell.

"At least two distinct varieties of Datura Stramonium are common in the United States. One of these has a green stalk and white flowers, and agrees with the figures of Sowerby and Woodville, except that the anthers are somewhat longer and the dissepiment of the capsule thinner. The second variety, the one represented in our figure, has a dark reddish stem, minutely dotted with green; and purple flowers striped with deep purple inside. It is generally a larger plant, and its stem more universally hollow. This variety is probably the D. tatula of Linnaus, answering to the description in the Species plantarum. The distinguishing marks laid down between the two plants are not sufficient to make them distinct species. I have cultivated both together and watched them throughout their growth, without being able to detect any difference except in colour. Their sensible and medical properties are the same. Sir James Edward Smith has lately informed me, that on consulting the herbarium of Linnæus, the original specimens of D. Stramonium and tatula did not appear to be more than varieties of the same plant.

"Every part of the Stramonium, when recent, has a strong, heavy, disagreeable odour, and a bitter, nauseous taste. Taken internally it proves a violent narcotic poison, affecting the mind and body in the most powerful manner. Its usual consequences when swallowed in considerable quantity, are vertigo and confusion of mind, insensibility of the retina, occasioning dilatation of the pupil and loss of sight, tremors of the limbs and loss of the power of voluntary motion, headach, dryness of the throat, nausea and vomiting, anxiety and faintness, and sometimes furious delirium. If the amount taken be large and not speedily ejected from the stomach, the symptoms pass into convulsions or lethargic stupor, which continue till death. When not fatal, its effects, like those of other narcotics, are temporary, disappearing in from one to two days, and frequently in a shorter period.—The remedies to be resorted to in cases of poison from Stramonium, are a prompt emetic, followed by a free use

of vegetable acids and strong coffee.

"Many stories have been related of the power of this and other species of Datura to produce mental alienation, without

at the same time materially affecting the body. These accounts are generally of somewhat ancient date, and not correspondent with the observations of later physicians. They were suited to those days of credulity, in which the Royal Society of London gravely inquired of Sir Philberto Vernatti, 'Whether the Indians can so prepare the stupifying herb Datura, that they make it lie several days, months, or years, according as they will have it, in a man's body; and at the end kill him

without missing half an hour's time?'

"Like opium, and like other powerful medicines, this plant, when taken in small quantity, and under suitable regulations, proves a remedy of importance, and a useful agent in the hands of physicians. In common with some other narcotics, it seems first to have been introduced freely into practice by Baron Storck of Vienna, as a remedy in Mania, Epilepsy, Convulsions, &c. Many subsequent physicians have given testimony to its efficacy in certain forms of these disorders, yet the instances of its failure have doubtless been more frequent than those of its success. In Murray's Apparatus Medicaminum may be found a summary of the reports of many medical men, who have tried it with various success in the diseases in question, as well as in others. Dr. Cullen has no doubt that it may be a remedy in certain cases of mania and epilepsy; but doubts if any person has learned to distinguish the cases to which it is properly adapted.

"Dr. Fisher, President of the Massachusetts Medical Society, has published in their communications some remarks on the employment of Stramonium in epilepsy. He divides the cases of that disease into three kinds; those of which the fits return daily; those in which they recur at regular periods, as monthly, or give warning of their approach by previous symptoms; lastly, those in which they do not observe any regular period, and do not give any warning of their approach. In the two first kinds he asserts, that all the cases which came under his care, and which were not very few, had been cured by Stramonium. In those of the third kind he found it of no benefit

whatever.

" Dr. Archer of Maryland has formed distinctions nearly

similar in the application of Stramonium to epilepsy.

"In a case of Tic doloureux of long standing, I found the extract, taken in as large doses as the stomach would bear, to afford decided relief. Several practitioners have spoken to me of its efficacy in this formidable disease. It should be taken in large doses, and the system kept for some time under its influence.

"Within a few years, the thorn apple has attracted much notice, both in Europe and in this country, as an efficacious palliative in Asthma and some other affections of the lungs, when used by smoking, in the same manner as tobacco. The practice was first suggested by the employment of another species, the Datura ferox, for similar complaints, in the East Indies. An English gentleman, having exhausted the stock with which he had been supplied of the oriental plant, was advised by Dr. Sims to have recourse to the common Stramonium as a substitute; and upon trial, experienced the same benefit as he had done from the former species. This instance of success led to further trials, and in a short time several publications appeared, containing cases of great relief afforded by smoking this plant in the paroxysms of Asthma. Many individuals, of different ages, habits, and constitutions, had used it with the effect of producing immediate relief, and of terminating the paroxysm in a short time. The efficacy however of this medicine was called in question by Dr. Bree, a physician well known by his elaborate treatise on Asthma, who published in the Medical and Physical Journal a letter, containing the result of a great number of unsuccessful trials of Stramonium in asthmatic cases. It may be doubted whether any other physician has been so unfortunate in its use as Dr. Bree, since he affirms that not one case of those under his care was benefited by it. Certain it is, that in this country the thorn apple is employed with very frequent success by asthmatic patients, and it would not be difficult to designate a dozen individuals in Boston and its vicinity, who are in the habit of employing it with unfailing relief in the paroxysms of this distressing complaint. The cases, which it is fitted to relieve, are those of pure spasmodic asthma, in which it doubtless acts by its sedative and antispasmodic effects. In those depending upon effusion of serum in the lungs, or upon the presence of exciting causes in the first passages, or elsewhere, requiring to be removed; it must not be expected that remedies of this class can afford benefit. several cases of plethoric and intemperate people, I have found it fail altogether, and venesection afterwards to give speedy relief.

"The part of the plant, which I have employed for smoking, is the leaf prepared in the same way as tobacco. The root, which has commonly been the part used, is more woody and fibrous, and possesses less of the juices of the plant, than its more pulpy and succulent parts. The root also, being strictly annual, has no opportunity to accumulate the virtues of the plant, beyond any other part.

"In the seventh volume of the Medico-Chirurgical Transactions, for 1816, is a paper on the properties of the Stramonium by Dr. Marcet of London, Physician to Guy's Hospital. the result of his experience, it appeared that this medicine taken internally had relieved acute pains of various kinds, more effectually than any other narcotic substance. Its usual effects under his observation, when administered in appropriate doses, in chronic diseases attended with acute pain; were, to lessen powerfully and almost immediately sensibility and pain; to occasion a sort of nervous shock, which is frequently attended with a momentary affection of the head and eyes, with a degree of nausea, and with phenomena resembling those produced by intoxication; to excite in many instances nervous sensations, which are referred to the œsophagus or bronchiæ or fauces, and which sometimes amount to a sense like suffocation; to have rather a relaxing, than an astringent effect on the bowels; to have no marked influence on the pulse, except in a few instances to seem to render it slower; to produce but a transitory and inconsiderable dilatation of the pupil, and to have but little immediate tendency to produce sleep, except from the state of comparative serenity and ease, which follows the preceding symptoms.—In some instances its beneficial effects were obtained without the patient experiencing any of the uneasy sensations above mentioned.

"The cases in which Dr. Marcet employed the Stramonium, with their results, appear in the following summary. In four cases of Sciatica, decided benefit was obtained. The efficacy of the medicine was still more strongly marked in two cases of sciatica combined with syphilitic pains. It failed in two instances of diseased hip joint. It produced considerable relief of pain in a case of supposed disease of the spine, followed by paraplegia; and likewise in one of cancer of the breast. It allayed materially the pain occasioned by an acute uterine disease. It was of great and repeated utility in a case of Tic doloureux, its utility in a second case of the same description was very doubtful, and in a third it entirely failed.

"There are some authorities for the success of Stramonium in Chorea. Professor Chapman of Philadelphia has found it of use in dysmenorrhea, also with or without mercury in syphilitic

and scrophulous ulcers of ill condition.

"The external use of Stramonium is of much older date than its internal exhibition. Gerarde in his Herbal, published in 1597, says, 'The iuyce of Thorne apples, boiled with hogs' grease to the forme of an unguent or salve, cureth all inflammations whatsoever, all manner of burnings or scaldings, and that

in very short time, as myself have found by my dayly practise, to my great credit and profit.' Others, since the time of Gerarde, have used this preparation, if not with the same gratifying success, at least with some benefit as an anodyne, sedative application. It mitigates the pain in burns and inflammatory tumors, and promotes the cure of certain cutaneous eruptions. In some irritable ulcers with thickened edges and a sanious discharge, I have found it remarkably efficacious in changing the condition and promoting the granulations and cicatrization. In painful hemorrhoidal tumors, the ointment of Stramonium with the ointment of acetate of lead gives, in many cases, very prompt and satisfactory relief, being in this respect inferior to no application, with which I have been acquainted.

"Applied topically to the eye, the preparations of Stramonium diminish the sensibility of the retina, and relax the iris. From this effect it is employed by many surgeons to dilate the

pupil, as preparatory to the operation for cataract.

"The virtues of Stramonium appear to be seated in an extractive principle, which dissolves in water and alcohol, but most readily in the former. It is copiously precipitated from the infusion by muriate of tin. With sulphate of iron it gives a deep green colour, and with gelatin suffers no change. ter distilled from the plant has the sensible qualities in a slight degree, but does not seem to possess the medicinal powers of the plant. Dr. S. Cooper, in a valuable dissertation on this plant, says, that an ounce of the distilled water was taken into the stomach with little or no effect. The same gentleman states, that upon evaporating the infusion of Stramonium, he observed a large number of minute crystals, resembling particles of nitre. Thinking it possible that these might be something analogous to the crystals, said to be obtained by Derosne from opium, and by him denominated the narcotic principle, I repeated the experiment by carefully evaporating separate decoctions of the green and dried leaves. No crystals however were discoverable at any stage of the process, either to the touch, or to the eye assisted by a strong magnifier.

"The forms in which the Stramonium is prepared for use are the powder, the inspissated juice, the extract, the tincture and the ointment. The powder should be made as soon as the plant is dry, and kept in close stopped bottles.—The inspissated juice is made by compressing the bruised leaves in a strong bag, until the juice is forced out. This is to be evaporated in flat vessels at the heat of boiling salt water to the thickness of honey; it is then suffered to cool, put up in glazed vessels and moistened with alcohol. The extract is prepared by

immersing a pound of the leaves in three gallons of water and boiling down to one. The decoction should then be strained and stand six hours to settle, after which it may be drawn off and evaporated to the proper consistence. When the seeds are used, the decoction should stand a longer time to separate the oil with which the cotyledons abound, before evaporation. A larger amount of extract may be obtained by boiling the portion, which has been used, a second time in a smaller quantity of water, and mixing the two decoctions before evaporation. For the tincture one ounce of the dried leaves is to be digested for a week in eight ounces of proof spirit, and filtrated through paper. In making the ointment, a pound of the fresh leaves may be simmered in three pounds of hogs' lard until the leaves become crisp. It is then to be strained, and cooled gradually.

"The period for gathering the leaves is from the time the

plant begins to flower, until the arrival of frost.

"As the preparations of Stramonium are liable to vary in strength, according to the circumstances under which they are made, it is always prudent to begin with the smallest dose, and repeat it about three times a day, increasing each dose until the effects begin to appear in the stomach or head.

"The commencing doses of the Stramonium, when properly

prepared, are as follows.

"Of the powdered leaves 1 grain.

powdered seeds ½ a grain.

inspissated juice or extract 1 grain.

extract of the seeds from ½ to ½ grain.

tincture from 15 to 20 drops.

"BOTANICAL REFERENCES.

"Datura Stramonium, Linnæus Sp. pl. Fl. Suec. 185, &c.—Gronovius Fl. Virg. 23.—Œder. Fl. Danica 436.—Blackwell t. 313.—Gmelin Iter. i. 43.—Pollich. Palatin. 224.—Hoffmann Germ. 77.—Roth Fl. Germ. i. 92. &c.—Woodville t. 124.—Curtis Lond. vi. t. 17.—Smith Fl. Brit. 254.—Engl. Bot. t. 1283.—Pursh Amer. 141.—Elliott Carol. i. 275.—Stramonium foliis angulosis, &c. Haller Helv. 536. Nuci metellæ congener planta, Camerarius Epitome 276.—Solanum fætidum pomo spinoso, oblongo, &c. Bauhin pin. 168.—Stramonium spinosum, Gerarde Herbal 343.

" MEDICAL REFERENCES.

"STORCK de Stramonio, &c.—LINDENSTOLPE de venenis, 531—SAUVAGES Nosol. 2. 430.—Greding in Ludwigs Adversaria i. 345.—Murray App. Med. i. 670.—Cullen Mat. Med. ii. 281.—Fowler in Med. Comment. v. 161.—Odhelius cit. Med. Comment. v 161.—Papin in Phil. Trans. abr. vi. 53.—Rush in Philad. Trans. i. 384.—Schoepf. 24.—Wedenberg in Med.

Comment. iii. 13.—Beverly. Hist. Virg. p. 121.—Medical and Physical journal, vol. xxv. & xxvi. in various places. Cooper in Caldwell's Theses, vol. i.—Barton, Coll. Mat. Med. 46.—Chapman in edit. Murray 146.—Thatcher. Disp. 205.—Marcet Medico-Chirur. Trans. vii."

In concluding, it is but just to observe, that the typographical part of the execution of this work is uncommonly fine, and that the paper on which it is printed is of a quality which has, we believe, been seldom if ever exceeded in the manufactories of this country.

Medico-Chirurgical Transactions, vol. vii. part ii. 8vo. pp. 300. London, 1816. Longman and Co.

[Continued from vol. vi., page 399.]

HE third of the surgical papers, contained in this part of these Transactions, is the Case of a Gun-shot Wound and Fracture of the Tibia, in which a Seton was successfully employed in promoting a Cure; by John Boggie, Esq. The fracture in this case was produced by a fall, which happened to the patient whilst he was attempting to walk with crutches, during the progress of his cure from a gun-shot wound. Both bones were fractured "at the site of the wound, and the consequence was violent inflammation, and high general fever;" but these being readily subdued, the cure went on progressively until the month after the accident, when a complete stop took place in "the process of consolidation in the bone and to the healing of the soft parts." On probing the wound a canal was found in the substance of the tibia, through which the seton was introduced, and brought out behind the leg "at the cicatrix of the exterior wound."

"A most favorable change took place almost immediately. Many small portions of bone were brought away by the seton, which was drawn through every day; the discharge soon lessened in quantity, and became again of good consistence: the swelling of the limb also subsided entirely. As the canal in the bone filled up, the seton was gradually lessened, till at last, about five weeks from the time of its introduction, it was altogether withdrawn. Both wounds healed up soon after. The limb remained somewhat shortened, but the union of the bone was at this time completed."—p. 340.

Somewhat connected with the subject of Mr. Boggie's paper is that of the communication we shall next notice, On the

Treatment of Sinuous Ulcers, by Henry Dewar, M.D. On this subject, and indeed on many connected with surgery, modern practitioners have most unaccountably neglected the practice of the older writers; and pupils are, now, too frequently impressed with the opinion that no useful practical information is to be obtained, from consulting any author prior to the period of John Hunter, or, at the farthest, that of the fathers of English surgery. This, however, is an error that

cannot be sufficiently exposed.

Galen in his treatise T_{α} Opparatorina, in a passage containing directions for the treatment of sinuous ulcers, part of which is transcribed by the author of the paper before is, says, "Let the turns of the linen bandages constrict (though without pain) the further end of the sinus, and be made gradually looser towards the orifice:" and again, "it is necessary that the orifice should not be at all compressed, but kept so free that the whole matter of the sinus may be evacuated by it." It appears that, previously to his having read the opinions of Galen, the same principle of treatment was adopted by Dr. Dewar; and the success of the practice founded upon it has induced him to recommend it to the profession. We will transcribe the passage containing his directions for the application of a bandage, in the case of sinuous ulcer in the thigh.

"A few turns of the roller should first be made with considerable pressure over one extremity of the femur, and then over the other, so as to reach with all possible certainty the extremities of the large sinus, into which the whole cellular interstices of the parts have been converted. It is safer to begin beyond the sinus than to run any risk of falling short of its extremities; and, in some cases, it might be proper to increase our security by means of partial compresses extending somewhat higher than it is possible to apply the turns of the roller itself. It is now fixed in its situation with a pin. A considerable pressure is easily borne, as no high inflammation is present, and the evacuation of the pus, by reducing the circumference of the limb, soon relieves the veins from any turgescence arising from the pressure to which they may have been at first subjected. In country practice, when a surgeon has been newly called to an old case of this kind, and a considerable interval may elapse before he is to repeat his visit, the swelling of the lower part of the limb may be obviated by bandaging it upwards from the toes. After fixing the bandage on the thigh at the degree of pressure which I have described, the surgeon may, if he chooses, make two or three lighter turns on the tumid part to assist the depletion of it,

taking care that these press so lightly as in no degree to counteract the operation of the first turns made at the extremities of the sinus. The change which this application produces is almost immediate. Part of the matter with which the integuments had been distended, is irresistibly forced a certain way towards the orifice; and no newly secreted matter is suffered to lodge in that quarter. On the second day, the limb is found somewhat reduced in size, and the bandage may now be applied more extensively. On the third day, it may be so applied as to be kept on for several days without alteration. The same degree of pressure is always to be continued over the extremities of the sinus, and several additional turns are to be made, gradually looser, alternately above and below the orifice, and approaching to it in both directions, but not reaching it. If there are two orifices, one of them, by which the matter can be freely brought away, is to be left uncovered with the bandage, and the other allowed to heal up. is no necessity for selecting the most dependent one for that purpose, as any advantage derived from the tendency given to the course of the matter by its own weight, is not worthy of attention under a treatment implying means of evacuation otherwise so powerful. The anterior orifice will often be found the most eligible, as it is examined and dressed with great convenience. During the alternate application of the bandage to the higher and the lower part of the thigh, it is frequently and variously crossed on the side of the limb opposite to the open orifice, and thus a propulsion of the pus is commanded in every direction to that outlet. A considerable part of the surface surrounding it is left uncovered, and the bandage is finally fixed. Over the orifice such light dressings are subsequently applied as will make no resistance to the discharge of the purulent matter. The firm propelling bandage is kept on without alteration, except when it becomes loose in consequence of a reduction in the size of the limb; although cleanliness requires the dressing immediately over the orifice to be changed daily or oftener. Thus all unnecessary trouble is prevented, an object which is sometimes of importance in securing the more perfect performance of those offices which are really necessary."-p. 487.

Now, without in any degree wishing to detract from the merit of Dr. Dewar, and whilst condemning modern practitioners for too much despising the ancients, and our writers on Elementary Surgery for neglecting to quote their practice in this particular, we must observe, that the principle of bandaging recommended by our author, are by no means confined to

himself at the present day; surgeons who think for themselves having long practised nearly the very method he has described, to empty sinuses, and promote the adhesion of their sides, when these are situated on parts to which compression can be advantageously applied. To those, however, who, instead of reposing on their own judgment, merely follow the precepts they are taught, we strongly recommend the perusal of Dr. Dewar's instructive communication.

The paper to which we have next to direct the attention of our readers, is undoubtedly one of the most important in the volume. It is intitled An account of a new Method of Operating for the Cure of External Aneurism, with some Observations and Experiments, illustrative of the Effects of the different Methods of procuring the Obliteration of Arteries;

by Philip Crampton, Esq. F.R.S. &c.

After slightly mentioning the effects of the labours of Petit, Pouteau, and Kirkland, Mr. Crampton states the practical conclusion drawn by Dr. Jones from the series of experiments made by him on the arteries of quadrupeds; and offers the following considerations, as sufficient reasons for the regarding the analogy, which has been supposed to exist between these and those of man "as more apparent than real."

"1. It may be stated in general, that the adhesive process is more quickly and certainly executed in all the parts of quadruped, (with the exception of the skin) than in man.

"2. In quadrupeds, wounds of the arteries in particular are so prone to unite, that no experimentalist has hitherto succeeded in producing an aneurism in this class of animals; the wounds of the arteries which have been inflicted with this view, healing like wounds made in any other part of the body.*

"3. The arteries of quadrupeds are not liable to that peculiar change of structure from disease which predisposes to aneurism, and which among other causes renders the operation of the ligature so uncertain in its effect upon the arteries of

man."-p. 343.

Reflecting, therefore, on these differences between the arteries of quadrupeds and man, and as aneurism is a disease peculiar to man, he justly conceives we ought not hastily to conclude, that, because the obliteration of an artery follows the division of its internal and middle coats by a ligature, in the lower animals, the same effects are the result of tying the arte-

^{*}Experiments have failed to produce aneurism in dogs, horses, &c. Jones, p. 117.

ries of man; and the object of Mr. Crampton in this paper is, "to shew, from a variety of observations and experiments upon the arteries of man as well as animals,—

"1. That the obliteration of an artery can very certainly be effected, independently of the rupture or division of any of

its coats.

"2. That this operation of the ligature, so far from being essential to the process, not unfrequently defeats it."—

p. 344.

The obliteration of arteries by pressure, and the effusion of lymph from their internal coats, and the cure of aneurism by compression, independent of any rupture of the internal coat of the vessel, are urged as facts confirming the first of the positions we have just quoted; and two experiments on sheep, selected, from many others made upon the arteries of horses and sheep, are detailed, to prove, that even in quadrupeds the obliteration of an artery can be as certainly effected without any perceptible injury being inflicted on its internal coat, as when that membrane is completely divided by the ligature.

Mr. Crampton next proceeds to shew that "the division of the internal and middle coats" of an artery in man, "not unfrequently prevents the obliteration of the artery "giving rise to secondary hæmorrhage, and even to aneurism;" in support of which he refers to a case described by Guattano, and one by Mr. Warner, in which "the brachial artery gave way three times under the ligature, and at each time formed a distinct aneurism." From these facts he conceives, that it is apparent,

"1. That we are not warranted in concluding 'that the internal and middle coats must be cut quite through all round the artery, in order to procure the adhesion of its sides,' but merely that adhesion may take place under such circumstan-

ces.

"2. That in man, the rupture of the internal and middle coats by the ligature not unfrequently gives rise to aneurism,

and to secondary hamorrhage.

"3. That a very moderate degree of irritation applied to the external coat of an artery, aided by a sufficient degree of compression to bring its internal surfaces into contact, is sufficient to effect the obliteration of the canal.

"4. That the permanent obstruction of the canal may be effected by such a process, in a period not exceeding twenty-four hours."—p. 351.

In reflecting that the first and most essential step in the spontaneous cure of aneurism is the coagulation of the blood in the sac, in consequence of the current through the ruptured artery being obstructed, Mr. Crampton was led to imagine that, "by a very little well directed aid from art, this process might be relied on for the cure of every species of external aneurism." When an aneurism is spontaneously cured, he thinks the cure is effected by one of the two following ways:-1. By the diminished action of the general arterial system weakening that of the diseased artery, the "reaction of the sac upon the vessel may be sufficient to obliterate its tube; or the blood may coagulate from its languid current, or so deposit layers of coagula as to convert the aneurism into a solid tumour pressing upon the artery." 2. Inflammation attacking the coverings of the aneurism, may so augment its bulk as greatly to increase its pressure upon the vessel, and thus obliterate its tube. know that spontaneous cures have been effected by one or other of these causes; and our author refers to some of the more remarkable instances of it on record. When the cure is to be produced by art, the intention is the same, either to diminish the force of the artery, or to increase the reaction of the aneurism; but the latter, which implies the compression of the sac, is now fallen into disuse: hence the object is to point out that mode of effecting the former, which is most likely to prove successful.

The operation by ligature is not unfrequently followed by secondary hæmorrhage; which has occurred even when "there was no reason to suspect a morbid condition' of the coats of the artery. Mr. Crampton attributes this circumstance, in every instance, "to the division of the internal and middle coats" of the artery by the ligature; and hence, although this is the fundamental principle of the operation, according to Dr. Jones's view of the subject, yet it is "precisely that kind of injury," observes our author, "which a diseased artery is least able to bear with impunity:" and such being the case, the question arises can "the obliteration" be effected by other and less hazardous means? Our author conceives it can be done by temporary compression of the artery above the seat of the aneurism, and details two cases in support of his opinion. We extract the detail of the various steps of the operation in the first case, in which the aneurism formed "a large and pulsating tumour under the fascia of the vastus internus muscle, immediately above the inner ham-string."

"The femoral artery was laid bare at the usual place by an incision not exceeding three inches in length, and a tape, one

eighth of an inch in breadth, was passed under it by means of the aneurism needle. The ends of the ligature were passed through the holes in the foot of the 'presse artere,' and then crossed through the hole in its stalk. The artery was gently compressed by drawing the two ends of the ligature in an opposite direction, until Mr. Stringer,* who kept his hands applied to the tumour from the commencement of the operation, announced that the pulsation had ceased. The ligature was then secured by passing a small peg of wood through the hole in its stalk, and a small dossel of lint was laid on each side of the instrument in order to steady it in the wound (a precaution which I have ascertained to be unnecessary,) and the sides of the wound were gently approximated by two or three stripes of adhesive plaster. The operation was completed in about twelve minutes."—p. 365.

Twenty minutes after the operation "an excruciating pain was felt in the calf of the leg," which abated for ten minutes on relaxing the ligature; but again recurred in the ankle and heel, and continued for four hours, when he' vomited freely, "and the pain immediately abated." The cure advanced progressively, the pulse and temperature being affected nearly as in the ordinary operation; and on the fourteenth day "the man went about the ward on crutches." This patient, however, did not completely recover, but died a few months afterwards of aneurism of the aorta. In the second case the operation completely succeeded, and "health was perfectly reestablished." An unsuccessful case of tying the femoral artery, in Mr. Travers' method, for an aneurism of the posterior tibial artery, is added to the paper. A violent hæmorrhage supervened on the fifth day, and the artery was again tied three inches higher up; but two days afterwards "the patient became delirious, and died on the following morning." Dissection shewed the artery ulcerated and "completely divided at the place of the first ligature."

We have been minute in our analysis of this paper, from a desire to render the subject of it readily understood by such of our readers as have no opportunity of perusing the original. The thanks of the Profession are certainly due to Mr. Crampton for the communication; and, as the reasoning employed is as convincing as the success of the operations described is satisfactory, we have every reason for anticipating the general adoption of this mode of operating in external aneurism.

^{* &}quot;Surgeon to the King's Infirmary."

The thirty-fifth paper of the volume details a Case of Inguinal Aneurism, cured by tying the external Iliac Artery; by

John Smith Soden, Esq.

In this cure, the operation was performed "according to the mode recommended by Mr. Abernethy," except that a very thin silk ligature was employed. No very untoward circumstance occurred to prevent the progress of the cure; the ligature was detached on the fifteenth day, and in less than two

months the patient was discharged cured.

The next surgical paper of our arrangement is intitled, Further Observations on Contractions succeeding to Ulceration of the Skin; by Henry Earle, Esq. In the year 1814, Mr. Earle read a paper to the Society on this subject; but as the success of the plan of treatment, which he proposed, rested on the authority of a single case only, the present communication containing two cases of his own, a third by Mr. Brodie, and a fourth by Mr. Ring, is brought forward as additional evidence in its favour. The treatment recommended consists in dissecting out the cicatrix that forms the bridle by which the part is contracted, and keeping the limb properly extended on a splint until the wound be completely healed. In Mr. Brodie's case, the bridle was on the anterior part of the neck, "drawing down the lower lip, cheeks, and angles of the mouth, keeping the chin much depressed, and preventing the jaws being closed." On removing the cicatrix, the edges of the wound were drawn together by adhesive plaster from side to side, "and a broad collar of pasteboard was applied round the neck over the dressings," by which means the new cicatrix was made vertical instead of transverse. Upon the whole the plan of Mr. Earle for the treatment of such cases is the best that has yet been proposed.

The last of the surgical papers is by the same author, and details the history of a Case of Hernia of the Dura Mater connected with Hydrocephalus Internus. The tumour, which in this instance was situated at the back of the head, was "large, transparent," and globular, and had existed from birth, the child being eight days old at the time Mr. Earle's assistance was solicited. In consultation with Mr. Astley Cooper and Mr. Woods, it was agreed to puncture the tumour, and apply compression. The operation was repeated ten times; but the case terminated unfavourably. On dissection, the sac was found to have a communication with the ventricles, which contained four ounces of serum; and it was evident that the quantity of fluid that had been drawn off by the different operations, was supplied from these cavities. In Mr. Earle's opinion, this

case "shews that the water contained in the ventricles may be partially drawn off, without causing syncope or any apparent disorder in the functions of the brain;" and, although we ought not hastily to draw inferences from an insulated case, yet, as the disease is occasionally met with, we conceive the practice recommended, when employed with requisite caution to exclude the admission of air by the punctures, may prove useful.

We have now to notice the medical papers, which are five in number. The first we shall examine is entitled, A Sketch of the Medical History of the First Battalion of the First Regiment of Foot Guards, during the Winter of 1812-13; by John Bacot, Esq. We are of opinion, that no species of medical writing is so likely to prove useful as the history of the health of an army, or even of a single battalion during a campaign, provided that the observations which have arisen out of the events are of a nature to elucidate difficult points of practice, to improve the economy of hospitals, or even to raise suggestions which may afterwards lead to useful investigations. We cannot say that the perusal of the history under consideration has left any very strong impression of its importance upon our minds. The facts detailed, however, serve to shew "that men just received from the militia are unfit for field service;" and that extreme "rigour and privation" are of themselves sufficient to produce fevers having much of the typhoid character, without the aid of contagion. Regarding the treatment of dysentery, which occurring in the period this narrative embraces, Mr. Bacot approves of the use of the lancet; but, he enters into no details illustrative of the particular effects of its employment: indeed, throughout his communication, the observations are too general to prove very in-

The next of the medical papers that presents itself, is a Case of Inflammation in the Muscular Structure of the Heart; by Edward Stanley, Esq. This case is extremely interesting from the peculiarity of its symptoms, which indicated the seat of the disease to be the brain, in which no organic derangement existed, instead of the heart where inflammation had run on to suppuration, extending "generally throughout the muscular structure of the organ." The patient was one of the boys in Christ's Hospital, and the history of the disease is drawn up from the notes of Mr. Field, the Apothecary of that Institution, who appears to have had the management of the case. The boy, who was previously in apparent good health, was attacked with "the usual symptoms of fever, namely, great

bodily heat, a quick pulse, the tongue white, and much furred." These symptoms increased on the next day; a transitory pain was felt "in the left thigh and leg;" and delirium and dilatation of the pupils supervened on the third day; but there was no coma nor insensibility to light; neither was their any irregularity in the action of the heart, nor pain in the thorax; and the boy, when closely questioned on the subject of pain, merely "pointed to his forehead." On this day, also, he had a slight convulsive fit; after which the other symptoms became more aggravated, until the following day, when respiration became for the first time difficult; and, gradually declining, he expired in the afternoon. We are rather surprised that under such a train of symptoms, which evidently indicated inflammation somewhere, the practice was confined "to evacuants and antimonials with the warm bath," the employment of the latter of which in particular we should have been slow to advise with the degree of heat and general excitement present .-Leeches to the temples, a blister, and calomel, were afterwards employed, but too late to be of any service.

On dissection, no marks of disease were perceptible in the head, the lungs, or the abdominal viscera; but on opening the pericardium the following appearances presented them-

selves:-

"It (the pericardium) was found to contain between four and five ounces of turbid serous fluid, with flakes of coagulable lymph floating in it. The internal surface of the membrane, both where it constituted the exterior bag, and the reflected layer upon the heart, was covered in various situations with a thin layer of lymph exhibiting a reticulated appearance. The size of the heart was natural in relation to the age of the individual. Upon cutting through its parietes, the fibres were exceedingly dark coloured, almost of a black appearance. This evidently depended on the nutrient vessels being loaded with venous blood. The fibres were also very soft and loose in their texture, being easily separable, and with facility compressed between the fingers. Upon looking closely to the cut surface exposed in the section of either ventricle, numerous small collections of dark coloured pus were visible in distinct situations among the muscular fasciculi. Some of these depositions were situated deeply, near to the cavity of the ventricle, while others were more superficial, and had elevated the reflected pericardium from the heart. The muscular fibres of the auricles were also softened in their texture, and loaded with blood, but without any collections of pus between them. All the cavities of the heart were loaded with

coagulated blood."-p. 326.

We agree with Mr. Stanley, that this case "is worthy of record;" not merely, however, on account of its rarity, but as a practical lesson, which strongly illustrates the necessity of early depletion, in all cases attended with great vascular action. By subduing the excitement of the heart and arteries, when that is inordinate, no harm can result, although we may remain completely in the dark regarding the seat and causes of the disease; but, by delaying the abstraction of blood until we can determine the organ which is specially effected, the evil may have already become irremediable.

The paper which follows in the order of the arrangement we have adopted, contains Some Observations on a species of Pulmonary Consumption, very frequent in Great Britain;

by Alexander P. Wilson Philip, M. D.

This paper is not less important, as a medical communication, than that which we have already noticed by Mr. Crampton is in a surgical point of view. It relates to a disease, which although not very rare, yet, is not very generally recognised. Dr. Philip arranges his subject in a clear and systematic manner, pointing out, in the first place, the symptoms which characterize this species of consumption; in the second, its analogy with diseases apparently different; and in the third, the plan of treatment which he has found most successful in it.

Of the Symptoms.—Dr. Philip confines his attention to those only by which the disease is particularly distinguished. The spirits are generally depressed, and the countenance is "more sallow than usual." The cough is at first dry, or nearly so, and recurs at intervals, in fits, which usually come on after eating; "and on lying down, especially" when the patient lies on the back with the shoulders a little raised: "but as in other forms of phthisis it is also troublesome on awaking in the morning." The matter expectorated is at first limpid and glairy, but by degrees becomes pus like and bloody, and the quantity often amounts to half a pint daily; yet, if it be free from blood, although pus like, there may be good hopes of recove-The dyspnæa is not urgent except in the recumbent posture, until the disease is considerably advanced. There is no pain high in the chest, but now and then a dull pain is felt low down in either side; or a darting pain "in various parts of the chest, or in the limbs, back, shoulders, or head." The hectic is seldom complete; and although the emaciation keeps pace with the state of fever, it "is seldom so rapid as in other

species of phthisis." But the most characteristic feature of this disease, is the deranged state of the digestive organs, marked by flatulence, irregular bowels, furred tongue, and tenderness of the epigastric region when pressed, which last accords in degree with the cough and dyspnæa. In the more advanced stage of the disease, all the symptoms of tubercular phthisis present themselves, and the fatal event occurs in the same manner.

Causes.—With regard to the causes of this form of phthisis, Dr. Philip observes, that in those predisposed it may be produced by all the causes which tend to debilitate the digestive

organs.

Dissection displays, besides the appearances usual in phthisical lungs, "almost always" either "a diseased state of the liver, or traces of disease having existed in it:" but the fatal issue of the disease does not appear to arise immediately from the affection of the liver, as the patient lives until "almost the whole lungs are rendered incapable of their function." The

spleen also is not uncommonly found diseased.

Of the Nature of Dyspeptic Phthisis .-- Under this head Dr. Philip discusses the question, "what is the nature of the relation observed between the affection of the lungs and that of the digestive organs in this species of phthisis?" In the majority of cases the affection of the digestive organs precedes that of the lungs; and it is more likely that disease should extend from these organs to the lungs, than that the opposite occurrence should take place: but it is also justly remarked, that, "it is not to be overlooked, that it is in those most disposed to pulmonary affection that disease of the digestive organs most frequently produces" this form of phthisis. The disease, nevertheless, occurs in habits little disposed to pulmonary affections, "when the digestive organs are naturally weak," or have been weakened by powerful causes of dyspepsia, particularly the free use of spiritous liquors. In illustration of the sympathy "which exists between the state of the digestive organs" and the lungs in this species of phthisis, Dr. Philip refers to Mr. Abernethy's work; and states, that, in the case of dyspeptic phthisis, related by that author, is found "the principle of the treatment which he (Dr. Philip) has employed for more than twelve years." The author has been attacked as to his, title to the character of a discoverer which he claims in this part of his essay; but, independent of his defence, which is already before our readers, we see nothing extraordinary in "two observers wholly unconnected, setting out from the most opposite quarters, and meeting in the same

point."

Dr. Philip next lays down the plan of treatment of dyspeptic phthisis: let us follow him closely in this important part of his subject. He remarks, that, as the affection of the lungs is influenced by "the state of the digestive organs," the means tending to improve the functions of the latter "will here be a useful auxiliary to those usually employed in phthisis:" and as one of the best diagnostics of dyspeptic phthisis is the fullness and tenderness of the epigastric region, indicating an affection of the liver, after the supervening of which only the lungs become affected, it is reasonable to suppose that, as we relieve that organ, we shall "find the affection of the lungs relieved." Our author divides the disease into three stages, "in which the prognosis and mode of treatment different." In the first, in which "the affection of the lungs is nearly sympathetic," the disease is mild, the fever slight, and the expectoration scanty, and consisting "of a colourless phlegm," or masses of a tough glairy appearance and blackish hue. When the expectoration in this stage is free, the "case is seldom troublesome," but when it is otherwise the disease is apt "to degenerate into the most alarming forms." In the second stage the lungs are actually diseased, which is indicated by the expectorated matter containing, "small portions of a pus like substance," the probable production of a simple inflamed surface, or these are occasionally streaked with blood from the giving way of small vessels, which, however, soon heal. The fever increases in this stage and "it seems to be at this period that tubercles generally form." In the last stage the tubercles run on to suppuration, "or the irritated surface of the bronchi and air cells becoming ulcerated," the attack assumes all the characters of true pulmonary phthisis. It is in the first only of these stages that a favourable prognosis can be given; and even in that, it must be cautiously hazarded, if the patient display symptoms of a scrophulous diathesis. In treating this stage Dr. Philip advises the attention to be chiefly directed to the

"Keeping up a freer action of the bowels than is necessary in health, and taking care, by occasional doses of the blue pill or calomel, according as the bowels are more or less acted on, to preserve a sufficiently copious and healthy secretion of the bile. I have generally given the mercurial, for the most part one grain of calomel combined with the compound extract of colocynth, every second or third night, desiring the patient not to go out the next day, till it shall have passed off,

and if it does not pass off in a couple of hours after rising, to assist it by a moderate dose of Epsom salts. In addition to these means stomachic medicines were generally used, particularly when the appetite was much impaired."—p. 525.

As a stomachic, Dr. Philip objects to Gentian on account of its heating quality, and yet, in the same paragraph, recommends, in addition to the extract of camomile flowers, "the powder or oil of caraway," either of which is certainly more

heating than the simple bitter.

In the second stage, the treatment must be necessarily varied with the symptoms. The following is Dr. Philip's

plan---

"Either laying aside or continuing the occasional grain of calomel, as the state of the bowels seem to require, I have given one grain of the blue pill combined with some mild stomachic, two or three times in the course of twenty-four hours, continuing it either till the tenderness of the epigastric region yielded, and a proper secretion of bile was restored, or the

gums appeared a little redder and fuller than natural.

"As the tenderness of the epigastrium abates, and the fæces assume the natural appearance, in by far the majority of cases the pulmonary symptoms gradually disappear. It has been said by many who have seen my practice, that little is to be expected from such minute doses, but I have found the gradual effect produced by such doses on the whole much more beneficial, than the more sudden effects resulting from larger ones, which often induce a degree of debility that more than compensates for the advantage obtained from them."—p. 527.

The strength must be at the same time supported; and, to relieve the tenderness of the epigastrium, when this is slight, "a succession of small blisters applied over the part is sufficient," preceded by the abstraction of a few ounces of blood "from the part:" but when the disease is obstinate, "a seton is often highly beneficial." In combination with the mercury, for the purpose of promoting "a regular and healthy secretion of bile," Dr. Philip has found no remedy "equal to the dandelion." Indeed when the stomach can bear it, he recommends a decoction of it poured upon camomile flowers, to be taken as the common drink of the patient,—

"When the dandelion can be given in the above ways, I often give only half a grain of the blue pill three times a day, and I think generally find as much advantage from it as from a whole grain without the dandelion. Many, I know, will regard the exhibition of such minute doses of murcury as little better

than trifling; if, however, they make a patient trial of them, they will, I am persuaded, alter their opinion."—p. 530.

If the gums be affected without the pulmonary symptoms being relieved, "the prognosis is bad:" but the hepatic irritation may be removed, and our author observes "it is surprising from what states the lungs will sometimes recover when relieved from the irritation of the hepatic affection." With regard to the form of exhibiting the mercury, Dr. Philip observes, that owing to the languid state of the absorbents, very little can be taken up by friction; and as the effects of the remedy depend "on the quantity which the system receives," its internal administration is to be preferred.

When the hepatic affection disappears, and the disease is wholly transferred to the lungs, as "happens frequently in the last stage of this species of phthisis," the prognosis must always be bad; but as long as the hepatic affection continues to recur, we have still some hope, "that on its final removal the

lungs may recover themselves."

With respect to the use of anodynes in this species as in the other forms of phthisis, Dr. Philip prefers a combination of the extract of conium and white poppy, opium being too constipating, and the anodyne effects of henbane doubtful. With regard to diet, he justly observes, "when the epigastrium is very tender, animal food and fomented (fermented) liquors are peculiarly injurious."

In every part of this paper, the talent of the author for the minute observation of symptoms is conspicuous; and the practice he recommends admirably adapted to fulfil the intentions of the practitioner: but Dr. Philip's character is already too well established to acquire additional value by any eulogi-

um we can pronounce.

The next paper of our arrangement, the thirty first of the volume, consists of Observations on Tetanus; by David J. H. Dickson, M.D. The chief object of the author in this communication is to illustrate an opinion he appears to have formed, that tetanus is always preceded by a torpid state of the bowels, a symptom which we believe is often a forerunner of idiopathic tetanus, but certainly not so constant an attendant on the traumatic form of the disease. In the cases which Dr. Dickson relates, the symptoms did not particularly differ from those described by preceding writers. He observes, that, "in some of them perspiration flowed very freely without bringing much relief;" and, in all, the dysphagia increased so rapidly as to render the administration of internal remedies impossible. The dissection of four interesting

cases, communicated by Dr. M'Arthur, which Dr. Dickson has subjoined to his paper, exhibited "the intestines much inflamed; and in two of them a yellow waxy fluid, of a peculiar offensive smell," was found "covering their internal surface;" but it could not be ascertained whether "the inflammation was primary," or only the effect of a contraction of the abdominal muscles in the severe opisthotonos that attended them.

As a prophylactic measure, when tetanus is likely to occur in a wound that is nearly healed, but in which the discharge has become vitiated or is suppressed, Dr. Dickson speaks favorably of the application of "blisters as near as possible to the wound itself, to re-excite suppuration," as practised by M. Larrey: and he adds his testimony to that of M. Larrey, that changes of temperature, and "particularly exposure to the cold night air," has a great influence in the production of tetanus. In noticing the decrease of the complaint in the West Indies, he ascribes it chiefly to "the greater attention paid to the state of the bowels, and not any physical change in the climate." How far he is correct in this opinion, we have no opportunity of judging; but if tetanus be a disease arising from irritation, every cause productive of this, whether in a wound or in the course of the alimentary canal, must necessarily tend to increase the disposition to the attack.

The cases of Dr. M'Arthur, as we have already remarked, are extremely interesting. In one of them, eighteen ounces of blood were abstracted at the commencement of the attack, and although the blood shewed no signs of inflammation, yet, in this case "the disease was longer protracted, and the morbid appearances after death were not so strongly marked as in the other cases." The following are the observations made by Dr. M'Arthur, in the inflammatory appearances in the bowels,

which his dissections discovered:

"The inflammation in this disease is different from enteritis, or from that which is present in persons who die of the endemial fever of the country. In enteritis the intestines often adhere to one another by layers of coagulable lymph, recently thrown out; flakes of curdled matter are often found, and pus sometimes is formed. In the inflammation attending tetanus there are no adhesions, no formation of pus.

"In the endemial fever the whole of the small intestines is more uniformly inflamed; the internal coats of the stomach and intestines exhibiting gangrenous spots and patches. The colon always contracted, but very rarely inflamed. In te-

tanus the colon was equally inflamed with the intestines, and not contracted.

"The yellow matter found in the stomach and intestines is very remarkable. It occurred in Collins and Harris, both of them treated on the stimulating plan, and it is probable had the intestines in the first case been opened, a similar matter would have been found. Is it to be considered a feature of the disease? or was it the consequence of the quantity of laudanum exhibited?"—p. 475.

The solution of these queries are undoubtedly of the greatest importance towards establishing a rational and successful mode of treating this dreadful disease; and nothing will be more creditable to the profession than the settling some consistent principles for the guidance of practitioners in warm climates, instead of the vague and ever varying empyricism which has

hitherto prevailed.

The last paper of this class, which we have to notice, is intitled, Facts illustrating the Effects of the Venereal disease on the Fætus in the Utero, and the mode of its communication; by William Hey, Esq. of Leeds. This paper is in the form of a letter to Mr. John Pearson, at the request of whom it appears to have been written. We know of few practitioners to whose opinions on practical subjects we feel more disposed to pay every deference than to those of Mr. Hey; yet, except the first case detailed by him, and which we subjoin, we doubt much whether any of the cases he has related will be generally regarded as genuine cases of syphilis. To rest upon the mere circumstance of the symptoms yielding to mercury, in alterative doses, although the appearance on the skin may bear a strong resemblance to secondary syphilitic eruptions, is placing the opinion on a very delusive foundation. The first case is thus described :---

"A poor woman, the wife of a soldier, brought to my surgery, a few weeks ago, her child, an infant betwixt two and three months old. This child, without any disorder in its bowels, had become extremely fretful; its voice was grown stridulous. It had upon its chin a scaly eruption, extending to the angles of the lips; and its body was covered with copper coloured spots. My inquiries of the woman respecting her own health, satisfied me that she had had the venereal disease, from which I apprehended she was not then entirely free. I directed half a grain of submuriate of mercury, with a few grains of pulv. tragac. comp. to be given to the child twice a day, and requested to see it again when the medicine should have been taken seven or eight days. The woman returned

at the time appointed, and shewed me her infant much improved in health. Its fretfulness had ceased, and its voice could scarcely be called stridulous. The copper coloured blotches were beginning to fade, and the eruption upon the chin was diminished. I advised the poor woman to persevere in the use of the medicine, till the disease should have entirely

disappeared; but I did not see her again."--p. 542.

Mr. Hey justly observes "that infants in general bear the use of mercurials, even in doses that will often affect adults, without any apparent disturbance of the animal functions." We cannot agree so implicitly with his remark, that syphilis may be communicated by the mother to successive children, in utero, without any fresh infection being received; and where the organs of generation remain "unaffected both in the husband and wife." We believe no point is so difficult to determine, as the existence of syphilis, when the symptoms do not unequivocally arise from sexual intercourse; nor are we prepared, in the case of infantine affections resembling syphilis, to admit the converse of Mr. Hunter's opinion regarding syphiloid diseases; and to accord with Mr. Hey, that "if the disease in question have the usual symptoms of syphilis, and will yield to no other remedy than mercury, we may fairly conclude that it is syphilitic." In one of the cases on which he founds his opinion, the mother, whilst in the seventh month of her pregnancy, had "the labia pudendi, and verge of the anus, beset with irregular fissures and condylemata; a discharge of puriform matter also issued from the vagina." Mercury was exhibited, and before her delivery the parts were healed; but the child had, when born, an universal desquamation of the cuticle; and at a month old, its voice became "hoarse and squeaking," and "a number of copper coloured blotches" appeared upon the skin. These symptoms disappeared under a mercurial course. This case, prima facie, appears almost decisive; but when we examine it clearly, and find that the husband "remained free from disease," when his wife was in the condition described, we conceive there is good reason for doubting the accuracy of Mr. Hey's diagnosis.

The concluding paper of the volume is On the Medicinal Properties of Stramonium, with illustrative Cases; by Alexander Marcet, M.D. Although the internal administration of this vegetable narcotic was introduced by Störck, so long ago as the years 1762, yet it was but little employed in this country until a few years ago, when the inhalation of its smoke for the relief of asthma became a fashionable remedy. The object of Dr. Marcet's communication is to shew, that stramonium,

when taken into the stomach, has the power "of allaying some of the most obstinate and severe kinds of pain." We have already noticed the mode of preparing the extract which Dr. Marcet employed, and the accidental circumstance which led

to its employment.

Fourteen cases, illustrative of the effects of stramonium in various painful affections, are detailed. In three of these, two of which were instances of diseased hip-joint, and one of tic douloureux, it entirely failed; but in the others, which were of attacks of sciatica, both simple and combined with syphilitic pains, paraplegia, cancer of the breast, acute uterine disease, and two of tic douloureux, its use was followed by the most evident benefit. As an example of the means of exhibiting it, and its more immediate effects, we extract the two most interesting of the cases:—

"CASE IV.—Sarah Mears, aged 23. This is a case which has for some years, at different periods, excited great interest in Guy's Hospital, and given rise amongst the physicians and pupils to much controversy and discussion. The particulars of this young woman's long and problematic sufferings, will probably be some day made public, but would not be relevant to my present purpose: The following short outline of the case, however, will be necessary to convey an idea of the effect of the remedy, the properties of which I have been endeavouring to

ascertain.

"The original symptoms were, so far back as five or six years ago, a tumour in the abdomen first inclining towards the left side, but afterwards occupying the whole abdominal region, occasioning in its progress exquisite pain with fever and extreme irritation, and yet not producing emaciation, and not permanently impairing the powers of the constitution, or disturbing the visceral functions. This tumour gradually increased to an enor nous size, so as greatly to exceed that of a woman in the ninth month of pregnancy, and the pain became more and more intense, till at last enormous quantities of a sanious or puriform fluid, mixed with blood and serum, were simultaneously discharged, partly by vomiting, and partly by the vagina and the rectum, and the patient soon recovered. In the course of a few months however, the complaint gradually returned with similar symptoms, which were again relieved in the same manner, and the tumour has now, for the eleventh time, gone through the process of filling and bursting, with extreme pain and subsequent sudden relief, in the way I have just described.

"It was on this last occasion, on the 10th of April, during the formation of the tumour, the pain being at its highest pitch,

and opium affording but little relief, though given in the dose of from six to ten grains, that the stramonium was tried in the dose of only half a grain, three times a day. This remedy uniform. ly produced, about a quarter of an hour after being taken, some giddiness and dimness of sight, which lasted a few minutes; but the pain was immediately allayed for a few hours; and the same relief was experienced whenever the pill was repeated. But after continuing the stramonium for five days, the contents of the tumor having been spontaneously discharged in the usual mode, and a truce to the pain having taken place, as on former occasions, the extract was discontinued. This time, however, the cyst was not allowed to fill again; but on the contrary, the moment that the symptoms of throbbing and fullness recurred, the accumulating fluid was forced out by external pressure, and discharged both by the rectum and vagina. During the last three or four months, this operation, which is always more or less painful, has been repeated once or twice a week, and the reproduction of the tumor, at least to any considerable extent, has thus been prevented. Yet such is the tendency to inflammation in the diseased part, that cupping and bleeding, which have been practised during the course of this illness upwards of two hundred times, are still frequently required. Latterly also the functions of the urinary passages have become so much impaired, that the use of the catheter is daily required; and an habitual state of pain and irritation have been induced, which though not equal in intensity to the fits of pain formerly experienced, yet frequently require the assistance of narcotic medicines*. This unfortunate young woman has now had such a long experience of disease, and has become so familiarized with the mode of using palliative medicines, that she has for a long time been allowed to take opium almost at her own discretion. But ever since she has become acquainted with the stramonium, she has had recourse to it in preference. She takes it during the exacerbations of pain, in doses of from half a grain to one grain of the extract from the seeds, or about double that dose of the extract made from the whole plant, either of which affords her more relief than even half an ounce of laudanum, which she now occasionally takes at one dose without much effect. monium however uniformly affects her head and eyes, but this effect is only transitory. I one day requested her to take the stramonium pill whilst I was in the hospital, in order that I might witness its immediate effect. In about twenty minutes

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^{* &}quot;It may be proper to observe that the affection of the urinary organs began long before the stramonium was used; and that it evidently originated from the pressure of the tumor on the distended bladder."

after taking it, her eyes became dim like those of a person either extremely sleepy or in a state of intoxication, the pupils appeared somewhat dilated, and she seemed extremely languid and unwilling to speak. The pulse, which was rather quick previous to taking the pill, had now become a little slower, though still rather above the natural frequency. In about half an hour however, all these effects had disappeared, and yet the relief obtained was still distinctly felt. Her bowels are generally open, sometimes relaxed, and scarcely ever require the use of aperient medicines."—p. 566.

"Case XII.—The following case, in which stramonium was used in *Tic douloureux* with evident benefit, being that of a lady, whose husband is a medical man of considerable experience and observation; and the outline of the case having been drawn up at my request by that gentleman himself, I shall lay it before

the Society in his own words.

"The complaint in Mrs. S.'s face* began in the first week in Lent, and continued about eight weeks, when it appeared to have yielded to occasional doses of opium, and a mixture of valerian, camphor and ether. During this period a plaster of cicuta and opium was applied to the face, and before it was removed produced active vesication. The relief however from this, if any, was but temporary. Mrs. S. now went into Hertfordshire, and the complaint returned in about a fortnight, which was probably induced by riding frequently in an open chaise in the high grounds of this country. The same remedies now having been again employed, afforded no relief, when recourse was had to the stramonium, in doses of 1-4 grain of the extract from the seeds, which afforded almost immediate cessation of pain, and was afterwards frequently resorted to for this purpose, and on no occasion was it necessary to repeat it more than a second time after an interval of two hours. The stramonium never produced any inconvenience, and never failed of relief; so much was this depended on, that Mrs. S. never went without some of the pills in her pocket. It was now thought that the complaint in the face might be connected with spasms in the stomach, to which Mrs. S. had been for some years subject, and which were connected with a costive state of the bow-With this view she was advised to adopt a mild mercurial regimen (the blue pill), and appeared to derive considerable benefit from its continuance. At present she has discontinued the mercurial plan for about two months, and had been free

^{*&}quot;This lady was seen by several medical men, and amongst others by Mr. Astley Cooper, who did not hesitate in considering her as labouring under Tic douloureux,"

from the complaint some time before. It may be necessary to mention that, during the first attack, the bark was taken in large quantity. The arsenical solution was also used, till it disagreed so much as to oblige us to leave it off. Thus, although the mercurial plan appears to have produced the most permanent advantage, yet it must be confessed that the effect of the stramonium was extremely beneficial in affording immediate relief when the pains were excruciating."—p. 575.

Such are the contents of the Second Part of the Seventh Volume of this Society's Transactions. In a publication, the successive parts of which succeed each other so rapidly, it cannot be expected that every paper will possess equal interest; but we know of no publication which constitutes so valuable a record of practice. Justice, however, obliges us to notice the careless manner in which many of the cases are drawn up; warfare being apparently declared by the writers against the articles a and the; the conjunctions that, but, and; the pronouns he, she, we, they; and almost every tense of the verb to be. The following are a very few examples of the sentences we allude to: "he took sixty drops of landanum every second hour, in as much wine as he could swallow; and a blister applied to the surface, &c." (p. 463); "neck and jaw of natural appearance," (p. 470); "a very extraordinary yellow fluid, resembling that in the stomach, was in great abundance in every part of the internal canal, which, upon cutting into the intestine, effervesced, &c." (p. 474). It would, assuredly, be more creditable to the Society, were the Council to rectify such errors, when the alterations can be made without impairing the sense of the author.

INTELLIGENCE.

Domestic.

IRIS VERSICOLOR.

in wet meadows, from Maine to Carolina, is the Iris versicolor of Dillenius and Muhlenberg, and the Iris Virginica of Michaux. The root of this plant possesses active medicinal powers, and is considerably used in the southern parts of the United States. The coloured engraving of this plant, which accompanies our present number, is one of the plates of Dr. Bigelow's American Medical Botany. The second half volume of that work, now in the press, contains the following plants. Kalmia latifolia, Spigelia Marilandica, Conium maculatum, Cicuta maculata Asarum Canadense, Iris versicolor, Hyoscyamus niger, Solanum dulcamara, Lobelia inflata and Solidago odora.

IPECACUANHA IN DYSENTERY.

A correspondent relates a case of severe dysentery in which "Clarke's injection of decoction of Ipecacuanha was ordered. Of the pint of this preparation, about three gills were swallowed by the patient, instead of being used in the manner prescribed. Vomiting of course succeeded, but by no means so severely as might have been apprehended. Warm water was given, and a small opiate." From this time the disease was cured, and in three days the patient was able to walk three or four miles to see her friends in a neighbouring village.

SILICEOUS SPAR.

Professor Hausmann of Gottingen has discovered a new species of mineral in the feldspar, which contains the tourmaline, &c. at Chesterfield. He has named it Nord Americanische Kiesel

Spath, or North American Siliceous Spar, and thinks it belongs to the feldspar family. The following are the analyses by Professor Stromyer, of Gottingen, of the Saussurite, Glassy Feldspar, and the Chesterfield mineral.

Saussurite.		Glassy Feldspar.		Chesterfield Mineral.	
Silex	33.75	Sliex	68*	Silex	70.88
Alumine	26.50	Alumine	15.	Alumine	19.80
Lime	11.	Potash	14.50	Soda	9.05
Soda	_4.	Oxyd of Ir	on .50	Lime	0.23
~				Oxyd of Ir	on
Oxyd of Iron 1.25			98.00	and Magne	sia ·10
Water	•50				-
	autonomot ap montasting				99.86
	99.00				

Thus it differs from the saussurite, by containing more silex and soda, and but a trace of lime, while that has 11 of lime; and also in nearly all its external characters; and from the glassy feldspar, by containing 9.05 of soda, while that contains no soda, but 14.50 of potash. These differences seem to be sufficient to constitute it a new species.

MUHLENBERG'S GRASSES AND FLORA.

Mr. S. W. Conrad of Philadelphia, has published the posthumous work of the late Dr. Muhlenberg, on the American grasses. It constitutes an octavo volume of three hundred pages, and contains minute botanical descriptions of the grasses, and of plants allied to them, found within the United States. The work is written in Latin, and being destitute of the common claims to popular favour, it must depend on its own intrinsic excellence for patronage. We can have no better evidence of the maturity of science among us, than the support given to works of this character. We trust there are botanists enough in this country to appreciate correctly a production, which fills a chasm in our natural history, and throws light on an important, but difficult order of vegetables. In the preface to this book, the editor announces another work of the same distinguished botanist, about to be printed from the manuscripts he has left. This is the Flora Lancastriensis, a full account of the plants in and about Lancaster in Pennsylvania. This Flora will doubtless be more extensive than its name indicates, and will probably present a good view of the botany of the middle states, like that given by Mr. Elliott of the southern states. Among other things, we understand it will contain the characters of all

the cryptoganous plants named in Dr. Muhlenberg's catalogue, the knowledge of which is at present a great desideratum. In botanical knowledge, experience, and accuracy, Dr. Muhlenberg had no superior in America.

LINNÆAN SOCIETY OF NEW ENGLAND.

This active society, whose unostentatious labours deserve to be more generally known, at a meeting in August last, appointed the Hon. Judge Davis, Dr. Bigelow, and F. C. Gray, Esq. a committee to collect evidence, with regard to the existence and appearance of the sea serpent, said to have been seen near Gloucester. The report of this committee has been recently laid before the society, who have given it to the public. The first part contains the declarations and depositions of several respectable men with regard to the appearance of this, and similar animals. The depositions generally, agree with the popular reports inserted in the newspapers in describing its serpentine form, apparent protuberances, immense size, and rapid motion. But the statements, that two or more of these animals were seen, one a male and the other a female, the former having three white rings round his neck and attended by two sharks and other such interesting assertions, derive no corroboration from these depositions. The deponents differ much in estimating its size; but when it is considered that different individuals may have seen different parts of the animal, some estimating the circumference of the neck and some that of the body, and also that the size of a distant object cannot be very exactly determined by a view merely, especially if the distance is not well known; these differences cease to be objections to the credibility of the witnesses. To one of them the animal seemed to move by horizontal sinuosities, to others, by vertical; but it is not improbable that it is capable of both these motions. There is some doubt whether it was smooth or rough, but this might arise from its being seen in different lights or from different points of view.

Some weeks after these depositions were in the hands of the committee, a serpent about three feet long was killed on Cape Ann not far from the sea, and was thought by those who had seen the great serpent, to bear so strong a resemblance to that animal, as to excite a conjecture that it was its progeny. Under this idea, it was brought to Boston by captain Beach, and submitted to the examination of the committee, who found it to be a nondescript, and on account of its external appearance and internal structure, accompanied by two drawings, forms the

second part of their report. It has received from them the name of Scoliophis Atlanticus. The report of the committee is concluded by a few remarks on the grounds of the conjecture that the Scoliophis is the progeny of the great serpent.

Foreign.

LAST ILLNESS OF MADAME DE STAEL.

[IF the following case be a sample of the Parisian practice, we think that the healing art has at least suffered no detriment from simplifying since the last century. Whether Madame de Stael's "evident cachexy" was hurried on to its fatal termination by the wanton neglect of "scorbutics and diuretics," "the five aperitive roots," "live millipedes," and other "known depuratives;" we pretend not to say. We think, however, that the family physician has adroitly washed his hands of all responsibility in the catastrophe. Ed.]

Account of the long Illness of Madame de Stael, her Death, and Appearances on a subsequent Examination; by M. Portal, her family Physian.

The Baroness de Stael, daughter of the celebrated M. Necker, the last Minister of Finance to the unfortunate Louis XVI. was equally celebrated by her highly esteemed writings and her political opinions, which had caused her to be exiled from France during the Revolution, and gained her a flattering recep-

tion by the principal princes of Europe.

Madame de Stael, whose physician I had been from her infancy, as well as that of her father, consulted me, on her return to Paris, for an ædematous swelling in her legs, with which she had been afflicted some time, and which gradually became worse. Her complexion, naturally dark, grew still darker; and her eyes even assumed a yellow colour. Her digestion was painful. She experienced great restlessness and want of sleep, which she had long been unable to relieve by the use of one or too grains of opium, which she had taken every evening. Although about 53, she had only recently ceased to menstruate.

I thought it necessary to prescribe aperitives, slightly diuretic pills, with medicinal soap; extracts of saponaria officinalis, hops, and gentian, in equal quantities, mixed with bullock's gall: four of these pills, of four grains each, were given in the morning, fasting, at twice, an hour elapsing between them; and two cups of a tisanne made with the roots of the rumex acutus and triticum repens, with the leaves of scolopendra, in which was infused a pinch of chervil, and to which were added ten grains of salt of nitre.

This simple treatment, in a few days, restored the urine, and diminished the ædema. Having, however, experienced light alvine evacuations, and recollecting that she had sometime before been troubled with a looseness, against which several tonics had been prescribed with effect, with a little more opium than she was in the habit of taking, in the evening she thought proper to consult another physician, who prescribed her very irritating powders, which soon made the alvine evacuations cease. Madame de Stael profited by this interval to make visits in Paris, and receive much society at her own house; but the cedematous state of the legs becoming even worse than before, and her complexion yellower, I was again consulted, and prescribed the same treatment as before, in order to restore the urine and stools. My prescription had a prompt success; but the patient was frightened at some slight bilious evacuations, though necessary, which the medicines produced, and she again consulted another physician, who advised her to take a larger dose of opium than usual. Costiveness ensued, the arine was considerably diminished, the skin became of a darker vellow than ever, and Madame de Stael fell into a profound stupor, which lasted so long as to create great alarm. I was once more consulted, and found in the pulse a decided fever: the urine was in a very small quantity, and very red, leaving a sediment still more so; the tongue was red; the lips and cheeks of the same colour; the rest of the face very yellow, and puffed; the hands and feet particularly edematous. I prescribed strong lemonade, and in each glass a few drops of nitrous ether. Lavements, slightly purgative were given. She recovered from the stupor, but the fever was really commenced, and became much worse in the evening. The urine was still in small quantity, red, and thick.

It appeared to me to be a real bilious fever, inasmuch as by the feel a swelling was discovered on the right hypochondrium. I was persuaded that the treatment ought to consist in mild medicines (the irritation being extreme) with aperients. The patient diminished the quantity of lemonade, to take, from time to time, chicken broth, with nitre, and a beverage of an infusion of traicum repens (dog's grass) and chervil, also with nitre, sweetened with the syrup of the five aperitive roots. This treatment was seconded by emollient clysters, and the patient was evidently much better. On the sixth or seventh day, I advised her drinking the waters of Vichy, at first mixed with chicken broth,

and afterwards pure, and at the end of the sickness to add

acetate of potass.

This treatment completely succeeded, as the fever diminished daily, and ended about the fourteenth day. The urine gradually became more abundant and clear, and the alvine excretions had proportionally become yellow and bilious, instead of grey, as before. The puffing-up of the face, and the ædematous state of the hands and feet, were considerably diminished. The region of the liver was neither so protuberant nor so hard: that of the spleen, however, remained a little tumefied.

It was towards the decline of this bilious fever that a skilful physician, M. Lucas, was called in. He thought it proper to continue the treatment I had prescribed, and confirmed my prescription of the waters of Vichy, united with the acetate of potass. He thought the moment favourable for it. At first half a drachm only was prescribed for the two glasses the patient drank in the morning, and by degrees the dose was augmented to a drachm in each glass. The alvine evacuations continued bilious without being abundant.

Madame de Stael appeared to get better every day. She was advised to get up, but, having felt some difficulty in standing, and more so in walking, she was soon obliged to remain in bed. She long complained of pain and spasms in the lower extremities; the urine became less; the skin resumed its yellow colour; she had borborigmi, with a tumid abdomen, but not hard; the ædema of the lower extremities increased; that

of the hands and even the arms was considerable.

Known diuretics were prescribed, as the tisane (beverage) of the five aperient roots, in which was infused chervil, and to which was added oxymel of squills. Slightly purgative clysters were also recommended, yet the ædema, or rather anasarca, which increased, appeared to point out the proper use of blisters to the legs, which we were the more readily inclined to, as the patient had had, for several years, an eruption in the face, but which had long disappeared, yet we thought it necessary to take it into consideration.

The waters of Vichy were suspended, and replaced by the juices of plants, as water-cresses, borage (bourroche,) dandelion, chervil, water trefoil, and live millepedes, bruised, in large quantities. These juices, well purified, with the addition of oxymel of squills, were given in the morning, in the dose of five or six ounces at twice. The patient also took, in the course of the day, a few glasses of an infusion of hops and chervil,

with nitrous ether and tincture of digitalis, which was also employed in frictions, in powder, in a mucilaginous liquor.

This treatment was so efficacious that Madame de Stael was enabled to go out in a carriage, as the weather was fine; but this recovery did not continue. She complained one day, in returning from her drive, that, in getting into her barouche, she had bruised one of her feet; that the pains increased, and she could not go a single step or support herself on her legs, feeling a stiffness and extreme weakness in the upper extremities, and more so in the lower ones, though at intervals they were very painful.

A skilful physician, called in, thinking the seat of the disorder in the liver, advised mercury in a gummy excipient, to which I could not subscribe, not thinking the seat of the disorder confined to that part, and mercury not appearing to me to be proper in the case, especially as there were ulcers on the tongue and in the mouth. This treatment was, however, tried, but soon abandoned, as the patient became much

worse.

I wished to examine the state of the matrix. A celebrated accoucheur, who was called in, thought it was enlarged. This was contradicted by an able surgeon, who decided that this organ was in no way altered; but he fancied the disorder lay in the spinal marrow, and that there was an extravasation in the vertebral canal. He thought blisters applied along the spine would be serviceable, and recommended a tonic liniment for the extremities, and even on the spine: this last article was

exactly followed. Numerous consultations followed, in which similar remedies were prescribed without success. A friction of tincture of phosphorus in like manner failed. The difficulty of motion in the lower extremities became greater; the upper ones, however, were a little more flexible. Madame de Stael complained of a pressure in the upper part of the breast, on which a physician, newly called in, applied a blister. Another wellknown physician fancied he discovered symptoms of hydrothorax, and that he even heard a kind of undulation in the cavity, by means of a sheet of paper rolled up like a trumpet, and applied to the breast and his ear. I certainly did not agree in his opinion, or method of proof, as the swellings had decreased, the urine re-established, and she was able to lie in her bed horrizontally all day; but, as the spasms continued, the same physician thought advisable to apply two plates of magnetised steel to the breast: the inefficacy of this was soon proved.

Madame de Stael became very thin: the stiffness continued, and she could not walk. Exciting and cooling remedies were

applied with the same effect.

A physician of Geneva was joined to those of Paris: he proposed the internal use of mustard, to restore the nervous systems, and stimulating ointments on the spine, together with an infusion of bark that I had prescribed for some time. But there was already an impression of gangrene in the region of the os coccygis, and two or three spots of that nature on the left lower extremity, which determined us on proposing strong doses of the antiseptic remedy, so often successful; but the progress of the gangrene was so rapid that all the succours of art were unavailing. Madame de Stael died the 14th July, at four o'clock in the morning, after an illness of upwards of four months.

Her body was opened and embalmed. I was not called to attend this operation, but I learnt from M. Jurine, who was present, that there was neither dropsy in the chest nor any disorder in the spinal marrow or the vertebral canal, no extravasation, &c. The viscera were in a good state; the liver only appeared hardened in some parts longitudinally, but nothing to cause so severe an illness. I think my treatment

had produced good effects.

May not some reproaches be made on the abuse of this treatment, and the employment of contrary remedies? As the ordinary physician knew the patient well, and her disorder, and the success he had already obtained, ought it not to have inspired some confidence, nay entire confidence, as well in the patient as her family? Madame de Stael was evidently afflicted with cachexy, which the bilious fever augmented; and was this even to a certainty removed? It is often followed by dropsy, and sometimes stupor and paralysis even of the lower extremities.

Would not the continuation of the juice of scorbutic and diuretic plants, which I had began to prescribe with success, to which was added the use of known depuratives, have been preferable to so many remedies which were administered, as the patient had been stationary for weeks, notwithstanding the use of stimulants prescribed on the one hand, and on the other cooling opiates. Extract of henbane was at one time proposed.

May not such treatment, continued for several months, have produced, or at least concurred, to the gangrene which was so rapidly followed by the death of Madame de Stael? PORTAL.

"Extraordinary Case of a Blind Young Person who can read by the Points of her Fingers; by the Rev. T. Glover.

[From the Annals of Philosophy.]

Being lately on a visit at Liverpool, I had a favourable opportunity of witnessing the exercise of an extraordinary faculty possessed by a blind young woman, named Margaret M'Evoy; and I have been induced, by the request of my friends, to send the results of my experiments for insertion in

your Journal.

Without pretending to give a medical report of this singular case, which an abler pen is preparing for the public, I shall briefly premise that Miss M'Evoy is a native of Liverpool, and about 17 years of age. She became blind in the month of June, 1816, from a disorder in the head, which was supposed to be water on the brain, and was treated as such: she was partially relieved by a discharge from the ears and nostrils. She has since experienced two returns of the same disease, and each time has been relieved by a similar discharge of fluid. A portion of this fluid has, I believe, been analyzed by Dr. Bostock. She has remained completely blind from the time of the first attack. She first discovered by accident, about the middle of October, 1816, that she could read by touching the letters of a book.

Having blindfolded her in such a manner that I was certain not a ray of light could penetrate to her eyes, I made the following experiments, most of which had not been tried before. I copy the results from notes taken on the spot, and nearly in

the order in which they were made:-

Exper. I.—I presented to her six differently coloured wafers fastened between two plates of common window glass. She accurately named the colour of each. She pointed out, unasked, the cracks and openings in the wafers. Being asked, while touching the surface of the glass above the red wafer, if the substance under might not be a piece of red cloth or paper, she answered, "no, I think it is a wafer."

Exper. II.—She described the colour and shape of triangular, square, and semicircular wafers, fastened in like manner

between two plates of glass.

Exper. III.—To the seven prismatic colours, painted on a card, she gave the following names: scarlet, buff, yellow, green, light-blue, dark blue or purple, lilac. As the orange paint was much faded, the term buff was correctly applied to it.

Exper. IV.—The solar spectrum being thrown by a prism, first on the back, and then on the palm, of her hand, she distinctly described the different colours, and the positions which they occupied, on her hands and fingers. She marked the moments when the colours became faint, and again vivid, by the occasional passage of a cloud. On one occasion she observed that there was something black upon her hand; but, perceiving it to move, she said it was the shadow of her own fingers, which was correct. The prismatic colours have afforded her the greatest pleasure which she has experienced since her blindness; the violet rays were the least pleasant. She never saw a prism in her life.

Exper. V.—The prism being put into her hands, she declared it was white glass; but, on turning it, she immediately said, "No, it is not; it is coloured; it has colours in it:" and she traced with her finger what she called "bent stripes of colours." She could discover no colours on that side of the prism on

which the direct rays of light fell.

Exper. VI.—She perceived the coloured rings formed by pressing together two polished plates of glass. She said she

felt them at the edge of her fingers flying before them.

Exper. VII.—Several attempts were made to ascertain whether she could discover colours in the dark, by presenting differently coloured objects to her hands, concealed under a pillow. She always failed; every thing appeared black. On

one occasion she said a green card was yellow.

Exper. VIII.—She read a line or two of small print by feeling the letters. She next read through a convex lens at the distance of nine inches from the book. The principal focal length of the lens is 14 inches. While reading, she gently rubs the upper surface of the lens with the tips of her fingers; she reads much easier through the lens than without it; she says the letters appear larger, and as if they were printed on the glass. A penknife was laid on the line which she was reading, and she immediately perceived and named it.

Exper. IX.—A concave lens being put into her hands, she tried to read through it at the distance of seven or eight inches, but said that the letters were all confused. As she moved the lens gradually towards the book, she at length perceived the letters, but observed that they were very small. She could not

read easily until the glass was laid on the paper.

Exper. X.—She read common print by feeling on the upper surface of a piece of common window glass held 12 inches from the book. At a greater distance she could not read; but could read much easier when the glass was brought nearer to the book.

In like manner she perceived through the glass several coins spread out before her; told which had the head, which the reverse upwards; pointed out the position of the arms, crown, &c.; read the dates; and observed, unasked, that one half-

guinea was crooked.

Exper. X1.—On applying her fingers to the window, she perceived two newly cut stones, of a yellow colour, lying one on the other, at the distance of 12 yards. She described a workman in the street, two children accidentally passing by, a cart loaded with barrels of American flour, another with loaves of sugar, a third empty, a girl with a small child in her arms, &c. One of the company being sent to place himself in different positions, she marked every change of position as soon as any one with his eye-sight could have done. A middle-sized man at the distance of 12 yards did not appear, she said, above two feet high. As he approached nearer, she observed that she felt him grow bigger. All objects appeared to her as if painted on the glass.

Exper. XII.—A stone ornament in the shape of an orange she took for a real orange, feeling through the plane glass at the distance of two or three inches; at the distance of 15 inches, it appeared no larger than a nut; at 30 inches distance, it was diminished to the size of a pea, the brightness of the colour

remaining undiminished.

Exper. XIII.—On touching a plane glass mirror, she said that she felt the picture of her own fingers, and nothing else.

Exper. XIV.—Holding a plate of plane glass three or four inches before the mirror, she was then enabled to perceive the reflected image of herself. When the mirror was gradually removed further off, she said her face diminished. All objects constantly appear as a picture on the glass which she touches.

Exper. XV.—She perceived through a plane glass, as before, the image of the sun reflected from a plane mirror; also the sun itself. She said that she was not dazzled with it, but

found it very pleasant.

Exper. XVI.—She accurately described the features of two persons, whom she had never seen before, holding the plane glass at the distance of three or four inches from the face.

Exper. XVII.—Several small objects were held over her head. She perceived them all through her plane glass. On one occasion she asked, doubtingly, if a three-shilling piece was not a guinea? but, raising the glass, and bringing it nearer to the object, she corrected her error.

Exper. XVIII.—She was unable to distinguish colours by the tongue; but, holding between her lips the red, yellow,

blue, and white petals of different flowers, she told the co-

lour of each accurately.

Exper. XIX.—She accurately distinguished polished glass from natural crystals by the touch. She declared three several trinkets to be glass, which were believed to be stone: being tried by a file afterwards, they proved to be paste. She also distinguished between gold, silver, brass, and steel; likewise between ivory, tortoise-shell, and horn. "Gold and silver," she said, "feel finer than the other metals: crystals feel more solid, more firm, than glass."

Exper. XX.—She could not discover, by feeling, any difference between pure water and a solution of common salt in

water.

These experiments were frequently repeated and varied, during the space of three days that I had the opportunity of

seeing her, with the same results.

I must observe that this faculty of distinguishing colours and objects is more perfect at one time than at another: sometimes it suddenly and entirely fails; then, every thing, she says, appears black. This sudden change seems like to what she remembers to have experienced when a candle has been extinguished, leaving her in the dark.

She says that she has not been taught by any one to distinguish colours by her fingers; but that, when she first perceived colours by this organ, she felt convinced that they were such and such colours, from the resemblance of the sensations to those which she had formerly experienced by means of the

eye.

From the preceding facts, it appears evident that Miss M'Evoy has perceptions, through the medium of her fingers, similar to those which are usually acquired through the medium of the eye. With respect to the manner how she acquires them, and the necessity of an intermediate transparent substance when she does not actually touch the object, I shall

offer no conjecture.

I have only further to add, that she has no apparent motive for attempting to impose upon those who visit her, were such an imposition practicable. She receives no remuneration from visitors. On the contrary, the mere presence of a stranger agitates her considerably for a time, so very weak and delicate is her state of health. Any noise or bustle affects her still more painfully: and I am ashamed to say that some of her visitors have showed a great and culpable disregard for her feelings, and subjected her to much unnecessary inconvenience.

Satisfactory as the Rev. Mr. GLOVER's account of Miss M'Evoy must be to all impartial readers, it cannot be amiss to add, that it has been confirmed to us by a conversation with another reverend gentleman, long and well known for his philosophic acquirements, the steadiness of his judgment, and his correct method of conducting experiments. At the same time we feel it our duty to add, that the number of skeptics even in Liverpool is considerable; and that we have heard reports which, till we can trace their origin, we do not think ourselves called upon to publish.

Med. and Phys. Journal.

CURIOUS EFFECT OF PASTE ON IRON.

At Deanston, near the village of Down, in the county of Perth, there is a manufactory where cotton is woven by machinery. Iron cylinders were used in order to apply the weaver's dressing to the cloth. This dressing, as is well known, is nothing but common paste made of wheat-flour or barleymeal. The cast-iron cylinder was in a short time rendered quite soft, and similar to plumbago, by the action of the paste. This corrosion took place repeatedly; and it was so rapid that the proprietors of the manufactory were obliged to substitute wood in place of the iron. I conceive that the paste employed was usually sour, that it was the acid developed, which, by dissolving the iron, produced this curious effect. A similar effect is produced upon cast iron by the action of muriate of magnesia, and probably other salts.—Thomson's Annals of Philosophy.

TO CORRESPONDENTS.

Several communications on "Aneurism," "Epidemic catarrh," "Polygala senega," &c. shall be inserted in our next.

ERRATUM.

Page 48, first line, for "tended to hurry on the mortification," read "tended to hurry on or extend the mortification."

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APRIL, 1818.

No. 11.

Account of a Fever which prevailed in the Boston Almshouse in 1817-18. By John B. Brown, M. D.

[To the Editors of the New England Journal.]

S a history of the fever which has been epidemical at the almshouse, in this town, for the last season, may not be uninteresting to the public, I take the liberty to make the following communication through the medium of your Journal. I will premise, that the subjects of this infirmary, are with the

exception of children, almost invariably invalids.

Their constitutions are broken down—either by intemperance, disease or old age. This fever commenced in May last, and was of that low typhoid kind, usually denominated goal—hospital or army fever. It was communicated to the house from two sources, and very nearly at the same time. The twenty-first of May, a coloured woman with two children were brought in sick; the mother was in the last stage of typhus, and soon died—the children recovered. The tenth of June, nineteen days from the time those people entered the house, a son of the woman, who was about ten years old, who had for some time previous been a subject of the house, was taken sick of the same fever.

He had frequently visited his mother and sisters during their sickness—and from him it gradually spread throughout the black wards. The eighth of June a white woman was brought into the house, who was recovering from a typhus; she was placed in a room, in one of the interior entries of the house. Being

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convalescent and having a husband with her, it was not thought necessary to place her in the hospital-this was a room occupied by married people. Soon after, her husband, and an elderly man and woman, who slept in the next bed, sickened, and in succession, people in the same room, in the rooms adjacent on the same floor, and in the different stories of the same entry, were taken with the fever. For six weeks all the cases of fever which we had in the house, originated in that entry. The patients were removed to the hospital, immediately, on their complaints being made known: at length, however, the fever extended to the next entry—the nurses in the hospital were taken sick, seven or eight in succession, and finally cases appeared in every part of the building. At one time, the situation of the sick was extremely embarrassing—as the fever at that period was confined mostly to women, there was not a sufficient number of well ones to take proper care of the sick, and the overseers found it very difficult to procure suitable persons to come into the house, on any terms, in the capacity of nurses. For several days there were none, or rather, none which I could place the least confidence in; therefore, I was, imperiously, called upon to render every personal service in my power-if I did so, I only did my duty as physician to the house, and claim no merit for it; but, my pupils, who acted voluntarily, are entitled to much credit. I feel it incumbent on me to mention them here, as some of them have suffered severely by the epidemic.* It is a little remarkable, yet is a fact, that I seldom had an opportunity of prescribing at the very commencement of the disease. So insidous was the attack, that the patient frequently was not aware of his indisposition, until remedies were rendered almost inert by the ravages of the disease, and death stared the unfortunate sufferer in the face. It was not uncommon to be informed by the porter, on my entering the house, that such a person was out of his head the night before, and had disturbed the people in the room where he lodged. On visiting him, he would be surprised that any one should suppose him sick-and would say that he felt very well, except a little weak.

Upon inquiry, however, he would confess that he had lost his appetite; that he had been unable to eat any thing for some

^{*} Particularly, Gamaliel Bradford, Jun. son of the warden of the State Prison. He has been confined to his room nearly twelve weeks; he was my only assistant for about thirty days, when others were sick or absent, and at the time we were most destitute of nurses. He rendered himself very serviceable, in attending on the sick, and his life was very nearly sacrificed to his humanity and exertions.

days; that at times he was sick at the stomach—troubled with pain and dizziness in the head, and that his limbs were weak; and on requesting him to walk, he would stagger about the room like one intoxicated. There was too that vacant stare of the eyes, and that confusion of countenance which accompanies ebriety: the pulse at this time varied very little from the healthy standard, and the tongue wore its usual appearance, except, perhaps, a little more red or pale than is natural. Some would neglect to apply for medical aid, until an advanced period of the disease: not alarmed at their own symptoms, (for they really felt nothing but debility, with some slight pain of the head and loss of appetite: symptoms not more alarming than those they had frequently experienced from a common cold.) They were in daily expectation of being better, and thus, the disease was allowed, insidiously, to advance to the eighth or tenth day. The tongue, at this time was covered with a dry, brown crust; the pulse feeble, not frequent; the

countenance sunk and the strength prostrate.

Nothing but mild evacuants, stimulants and tonics were indicated, and these were administered: others, whom I warned of their danger at the very commencement of the disease, (for typhus was depicted on their countenances) obstinately persisted in refusing every remedy, and went sullenly about the house, tottering from one room to the other, and under the delusive hope, that eating would give them strength—they staggered to their meals, daily, until death fixed his frigid hand on their extremities, and paralyzed their motions. A few, on the other hand, applied at the commencement of their indisposition, and by the seasonable exhibition of an emetic, followed by a carthartic, the disease was entirely removed: and where this was not the happy result, it almost invariably assumed a milder form, was shorter in its duration, and less fatal in its consequences. But these cases were, comparatively, few; a large majority of those who suffered under this epidemic, neglected to apply to me, till the fourth or fifth day from the commencement of the attack. The symptoms were, very uniformly, as follows-great debility, loss of appetite, nausea, fugitive pains in the limbs and joints; and fixed pains in the head and back; the tongue either pale and moist, or red, smooth and glassy—the skin soft and flaccid, the pulse feeble, sometimes irregular, but never remarkably frequent. These symptoms were somewhat mitigated by the timely exhibition of evacuants, such as an emetic followed by a cathartic; but, generally continued without much palliation, for ten or twelve days from the commencement-when the tongue became of a dirty brown colour, hard, dry and parched: the speech thick, as though the tongue was too large for its cavity, or too stiff to be moved, which, indeed, was the fact, for the surface of it was almost as hard and inflexible as horn. The head confused and delirious,—the eyes dull, heavy and vacant, were half closed and cemented together by a thick yellow matter, secreted from the glands of Meibomius; which in some cases was very profuse, even so as to fill the eye and socket, extending from the cheek to the eyebrows-the palpebrae superiores collapsed over the eye, as though its levator had lost its tone, or wearied of its office, refused to perform its appropriate function. The sense of hearing was very obtuse, and in some cases almost extinct, for the loudest sounds applied to the external organs produced no sensible effect; in fact deafness more or less, accompanied the disease from its very commencement, and not unfrequently continued for several weeks after every other organ was restored to its healthy action, and the patient discharged as cured.

Treatment. It will be recollected, that in a great majority of cases, application was not made for medical assistance, until the fourth or fifth day from the commencement of the disease. It will, therefore, be understood, that the remedies which I shall here mention, as having been made use of, have reference to those cases only. Where application was made, either, earlier or later, remedies were prescribed, which were thought best adapted to the respective circumstances of the disease.

An emetico-cathartic, however, was most generally prescribed in all cases, whether application was made early or late: this was composed of Pulv. Ipecacuan, and Sub-murias Hydr. in portions appropriate to the age, sex, and constitution. In the early part of the season, before typhus spread so universally throughout the house, mercury, opium and antimony were relied upon; but, owing to the debilitated state of the subjects, or the nature of the epidemic, they were ineffectual. It was found that by the time the mercurial action was excited, the powers of the constitution were irretrievably exhausted.*

^{*} Still, however, I rely upon those articles in typhus, as it usually appears in this town and its vicinity—and have found them more efficacious, than any other remedies I could make use of. Mercury is a most powerful agent in destroying febrile action, and there has not been a case, yet, of typhus (almshouse patients excepted) within my sphere of observation, where the mercurial action was fairly excited and its specific effects produced, that the patient did not recover,

These remedies, therefore, were laid aside, and wine, camphor, bark, blisters and the warm bath, with frictions, were substituted and with much greater success. It was customary after the first evacuations, to apply a blister to the neck, and frequently to each of the extremities, and also to the region of the stomach—to give wine freely—and camphor in three grain doses every four hours-to administer some cathartic medicine, as often at least, as every other day-bark was not usually prescribed in the early part of the disease, and not till the brain or stomach gave indications of a more healthy action: the warm bath was made use of occasionally, but owing to a want of confidence in the management of the nurses, it was not recommended so often as I could otherwise have wished. Opium was made but little use of, as it was found to increase the stupor and confusion of the head, and did not produce that quiet sleep, so desirable in this disease. A blister on the neck, accompanied with the free use of wine, and followed by frequent cathartics, had a most salutary influence in restoring the brain to its healthy action, and frequently succeeded in procuring a natural and refreshing sleep, when opium had either no effect, or one directly opposite.

I had, in private practice, prescribed cathartics in an advanced stage of typhus, with some degree of fear, that my patient might be too much reduced by their operation; but, I am now convinced, that too much cannot be said in favour of Hamilton's practice. There is much more to be feared from the debilitating effects of the morbid matter, with which the stomach and intestines are generally loaded, than from the operation of cathartics. I never have, in any one instance, (and I have made free use of them) been sensible of their producing debilitating effects, but usually the reverse. I was convinced of their efficacy, not only from their effects, in removing the coat from the tongue, in raising the pulse and relieving the head, but forcibly, from appearances on the examination of bodies. There was one instance of a boy ten years old, who died of this epidemic, [I will observe here, he was the only young person who died of it] who had been evacuated very freely, till immediately before his death,-still on inspection, the stomach was found to contain a large quantity of green mucus, and the intestines were loaded with a dark chocolate coloured, fetid matter. The stomach and intestines were slightly inflamed; there were dark livid spots on the surface of the body, and a decided inflammation of the brain. The spinal marrow and brain were much harder, and firmer than is usually observable.

The pulse in this case were soft and feeble: very different from the pulse attendant on acute inflammation, which indicate the use of the lancet. He was treated with sub-murias Hydr. opium and antimony, given as alteratives. The stimulating mode of treatment, or that which I found most successful, was adopted about the first of September last, and has been pursued, with few exceptions, to the present time. About the first of November, I began to hope that the fever was assuming a new type, and becoming more inflammatory, as several cases occurred, where there were some appearances of re-action; and as bleeding had been recommended by many writers of distinction, in fevers of a similar nature, I was persuaded to make trial of it in a few cases, where I thought it most indicated, and was so much gratified with its success for the first few days, that I was induced to persevere in the practice, and bled fourteen of those who were attacked with the disease; some of them two or three times. Soon, however, I discovered that my hopes, from this remedy, were entirely delusive; for, although bleeding produced some transient relief of the pains in the head, and rendered the symptoms more mild, at first, still the subjects of it, soon sunk into a state of debility, which but too often terminated in death: and when this was not the result, the patient relapsed and relapsed until the disease was protracted to a very great length; and the recovery, at last, was seldom complete, as there generally remained some visceral congestion, or chronic derangement of some of the functions. From the fourteen who were bled, five only recovered. It is unnecessary to make many comments on this subject, as facts speak for themselves. That bleeding in some cases of typhus may be a useful remedy, will not be denied; but, that it was not beneficial in that species of typhus which has been epidemical at the almshouse, for the last season, is very evident from the above statement. It will appear, from the examinations here annexed, that the brain was the part most affected in this fever--and next, the stomach, intestines and lungs. There were some traces of inflammation in all of those organs: the meninges of the brain were inflamed; there was a venous congestion and an effusion of serum in the ventricles; and in some instances, in the convolutions of the brain, and between the dura and pia mater. The internal coats of the stomach and intestines, were, in most instances, slightly inflamed. In one case, there was an extensive inflammation and an effusion of coagulable lymph in the left cavity of the thorax. I will remark here, and it will appear from the details of the case here annexed, that there was no one symptom, that

definitely marked an inflammation of this part. The patient complained of no pains in that side, and there was, apparently, no difficulty of respiration. The pulse were slow, soft and

regular, during her whole sickness.

The theory of bleeding where inflammation prevails, is a very plausible one; but, should we not accurately discriminate between acute and sub-acute inflammation? Bleeding in the former, is a useful and efficacious remedy; but, in the latter, if persisted in, inevitable death. Where diffusible stimuli succeed, general bleeding must destroy! I was induced to make trial of it in the few cases which I did, for the following reasons. I was not satisfied with the success of the mode of treatment I was then pursuing, and was willing to make any alteration that had ever been found useful in similar cases; or that carried with it the least shadow of probability, that it might relieve the distresses of the poor unfortunate people, who were suffering under this epidemic.

As bleeding had been practised, and recommended by Sydenham and many of the older writers, and recently by some authors, whose opinions are entitled to respect, I felt myself justified in giving it a trial. Dr. Armstrong, who has lately written with much accuracy and discrimination on typhus and other febrile diseases, recommends it. He has divided typhus into three varieties; viz. simple, inflammatory and congestive; and

decidedly recommends bleeding in the two last.

"In the severest cases of congestive typhus, there is from the beginning, great apparent debility, which speculative men have considered real-and have attributed it to the direct influence of the contagion, as a sedative, without ever reflecting that it chiefly depends upon the changes which take place in the circulation-and, that it is no more to be accounted positive exhaustion, than the loss of muscular power, which precedes and accompanies the threatenings of genuine apoplexy, to which disease, in fact, this form of typhus has often a forcible resemblance. In general it comes on very suddenly, and what magical change, it might be asked, has been wrought in the system, in the period of a few hours; -that the subject, who the moment before his sickening, might have been largely bled, without the least prejudice, should now, that he is actually indisposed, be all at once pronounced incapable of bearing the smallest abstraction of blood. To permit ourselves to be influenced by preconceived theories and puerile fears, on such emergencies, is in effect, to conjure up ideal phantoms, which paralyze our energies when they are most urgently required."*

I cannot agree with Dr. Armstrong, that in general, typhus comes on so suddenly. In most of the cases I have had an opportunity of witnessing, it has come on very gradually, and, indeed, almost imperceptibly. The patient has usually complained, on my first seeing him, that he had been indisposed for a number of days—and, owing to a loss of appetite, had taken very little nourishment. This paucity of sustenance, independent of the influence of contagion, would rationally account for the "positive exhaustion" or at least that the "debility" was not merely "apparent." I have no doubt, but that topical bleeding may be useful in some cases, wherever diffusible stimuli are indicated; but I cannot speak experimentally, as I never have tried it. The theory is plausible, but the practice, I imagine, would be difficult. For instance, suppose the veins of the brain, owing to debility and relaxation of their coats, are distended with a disproportionate quantity of blood; how are they to be relieved, without reducing the system generally, but by opening the internal jugular veins? It has been recommended in such cases to bleed from the temporal artery, or external jugular veins; but, I suspect, that where bleeding from these vessels has given relief, general venesection or bleeding from the arm, would have had the same effect: for, what immediate connexion has either of these vessels with the brain? Bleeding from them can operate only on that organ, by lessening the quantity of blood in circulation, and thereby, reducing the vis vita of the system generally.

As there was a great uniformity of appearances in all the bodies we examined, the following will be sufficient to give a

general idea of the parts affected in this epidemic.

Examination of S. C. Æt. 47. Livid spots on the surface of the body—brain slightly inflamed, and somewhat harder than usual—spinal marrow quite hard—stomach and intestines slightly inflamed—a considerable quantity of green mucus in the stomach—a remarkable contraction of the colon—glands about the pyloric orifice, uncommonly large—lungs in a natural state.

M. S. Æt. 45. Great inflammation of the brain—the pia mater was elevated in some places the fourth of an inch by serum, which filled all the convolutions of the brain. The stomach and intestines were also inflamed—the lungs were

striated with black venous blood.

E. V. Æt. 60. Great inflammation of the brain—the pia mater much elevated—the convolutions of the brain filled with serum. This woman was sick about thirty days, and took no medicine for the first ten or twelve days, as it was impossible to persuade her, that she was under the influence of the

fever. Two or three days before she died, a large tumour appeared suddenly on her neck—a swelling of the parotid gland.

There was a venous congestion of the brain, and water,

more or less, in the ventricles of all we examined.

History and Treatment of the Case of J. C. a Woman, Æt. 55. First day. Had been sick three or four days—great pain in the head, back and extremities—pulse eighty-five and feeble—skin soft and flaccid—tongue red and shining—great prostration of strength—nausea and vomiting.—Gave her xv. gr. Pulv. Ipecacuan. and x. gr. Sub-mur. Hydr.

pain in the extremities—pulse, tongue and skin the same—the powder given yesterday, operated very well as an emetic.—

Gave Pulv. Jalap. Sub-mur. Hydr. a a vi. gr.

Third day. Pain in the head and back continues—pulse eighty-five, and feeble—tongue and skin the same as on the preceding days.—Powder operated very well.—Gave Submur. Hydr. 1 1-2 gr. Pulv. Opii 1-2 gr. every four hours, and a blister on the neck.

Fourth day. Pain in the head and back abated—skin still soft—pulse eighty-five, and feeble—tongue began to turn dark. Gave Sub-mur. Hydr. 1-2 gr. and Pulv. Opii 1-2 gr. every four hours.

Fifth day. Still complained of some pain in the head—began to grow stupid, deaf and difficult to rouse when spoken to—pulse eighty-five, but more feeble—skin still soft and flaccid—tongue grows darker—gave her wine and camphor.

Sixth day. Symptoms in every respect as yesterday-

continued the medicine.

Seventh day. Symptoms precisely as the two preceding

days-treatment the same as on the two preceding days.

Eighth day. Stupidity increased—tongue of a dark colour, hard and dry—very little alteration in the pulse or skin. Medicine continued.

Seventeenth day. Died. The symptoms have uniformly been the same, since the last date. Debility increased, and life was gradually extinguished. This I suppose the twenty-first from her attack, and the seventeenth from her application to me.

Examination. Venous congestion of the brain and a small quantity of water in the ventricles. Slight inflammation of the stomach and infestines—the lungs were inflamed, particularly, the left lobe. There were, also, adhesions of the pleura, and a very considerable effusion of coagulable lymph in the left cavity of the thorax.

Case of W. P. Æt. 25. First day. The patient had been indisposed five days—symptoms characteristic of typhus were now obvious—severe pain in the head and back—nausea—a white thin coat on the tongue, weakness and general lassitude—pulse ninety. Gave Pulv. Ipecac. 20 gr. Sub-mur. Hydr. x. gr.

Second day. General weakness and stupor. The tongue has a brown thick coat, and is remarkably dry; sleep disturbed—pulse eighty in the morning, and eighty-five at twelve o'clock. Let him have a blister on the neck, arm and leg—

wine and diluted muriatic acid-warm bath at night.

Third day. Much more comfortable—skin moist—complains of a heaviness in the head—pulse eighty, and soft. Gave him wine freely and continued the acid.

Fourth day. No alteration since yesterday-the wine and

diluted muriatic acid continued.

Fifth day. Evidently better, head clear and lucid. Pulse eighty—skin moist. Continued wine and camphor as yesterday, and gave bark every four hours.

Seventh day. Symptoms the same, and medicines continued. Eighth day. Every symptom denotes a favourable termination. Pulse eighty. Continued the wine, camphor and bark

as on the preceding days.

Ninth day. Continues better—the coat is partially removed from the tongue—pulse seventy-five—begins to have an appetite. Wine and bark continued.

Tenth day. Continues better—continued the wine very freely, and the bark, and gave him broth and other liquid nourishment, as he relished.

Sixteenth day from his application, and the twenty first from the commencement of the disease, he was discharged, cured.

December sixth, A. B. about twenty-three years of age applied to me. He complained of severe pain in the head and back; his tongue was slightly covered with a white coat. As he was young and the pulse rather full and frequent, I bled him twelve ounces; gave an emetico-cathartic, and treated him with mercury, antimony and opium. The symptoms gradually subsided, and he grew better.

Eleventh day. He was able to sit up.

Fourteenth day. He had had no sleep for three nights in succession, though he had taken from fifty to eighty drops of laudanum each night. His pulse were then quick and frequent; he was delirious, and his case seemed almost desperate. Having witnessed at the almshouse, the beneficial effects of wine, where laudanum gave no relief, I was induced to push

it, and directed a half pint to be given every hour, till it produced sleep. After having taken two bottles of Champaign, and one of old Maderia, I found him in a quiet, refreshing sleep; his pulse were reduced from one hundred and forty, to seventy in a minute, and his skin was moist and flaccid.

January 1st. He gradually convalesced from the last date; at this time, however, some troublesome complaints commenced; such as dysuria, pain in perineo, and about the rectum. Those were so severe as to retard his recovery, and

gave reason to fear the formation of an abscess.

January 11th. The above symptoms subsided, but more formidable ones succeeded. He had a hectic flush on his countenance, pain in the left side, difficult respiration, and was unable to lie on either side. The appearances of the tongue remained stationary for twenty days; it was partially clean, but a very considerable part of it was covered with a dark brown coat. Put him upon a mercurial course of treatment, gave Tinct. Digitalis, mild tonics and as much nutriment as the state of his stomach would bear.

February 1st. He had been under a gentle salivation for ten days, and every unpleasant symptom was fast subsiding. The tongue was quite clean, the pulse natural and regular, respiration easy, and he was able to lie on either side indiscriminately.

It is now the first of March. His health is very much improved, and there is every reason to believe that it will soon

be perfectly restored.

Note. The Almshouse of Boston, was built A. D. 1800. It is situated in the northwesterly part of the town, on Leverett street. It commands an extensive prospect, and the site is healthy. It is erected in the centre of a large plat of ground, leaving a yard on either side, seventy-five by two hundred and fifty feet. That on the west side is laid out and appropriated for a garden, which from its capaciousness and pleasant situation, affords a cheerful and comforting prospect to the occupants of the house. That on the east side is appropriated for out-houses and the various out-door conveniences of the establishment. In this yard has recently been erected, two other buildings of brick, two stories high; one for a house of correction or Bridewell, the other for poor people of colour. The almshouse is two hundred and fifty feet in length, and fifty wide; it comprises five distinct houses, forming a centre and two wings; the wings, each containing two houses, three stories high: the centre two stories, which are appropriated for a chapel and school-room; the whole standing on a basement story,

which being partly below the surface of the ground, conveniently subserve the various purposes of cellar, kitchen, dining room, &c. all of which, are connected by a common passage.

This edifice exhibits two fronts, furnished in the same style; the centre is elevated above the wings; its fronts are ornamented with Ionic and Corinthian pilasters, with a neat pediment at the top, whose frize is decorated with a beautiful group, representing Ceres, with cornucopia, bestowing the bounties of nature to a number of little orphans, who seem engaged, some in expressions of gratitude to the giver, and others peacefully reclining, or sporting with joy, in the midst of plenty!! On the apex of the pediment, is represented a female figure, embracing and nourishing a number of infants, which, with the group below, constitute a striking characteristic of that charity which actuated the inhabitants of Boston, in the erection of this asylum for the distressed--and of that munificence which has so long supported the institution with a liberal hand.

The house at the southern extremity of the building, is improved by the master and his family, and contains a large and elegant room, appropriated as an office, where the board of overseers hold their meetings, and transact their business, re-

lative to the establishment.

The house at the northern extremity of the building is occupied by men. It contains a hospital, for the men, a syphilitic ward, and a cleansing room, so called-which is a room, where all the men who enter the house, are received, washed

and anointed if they require it, and cloathed.

The two houses, second, each way from the extremities, are occupied by women, married men, and their families. them contains a hospital for the women, a syphilitic room for females and a cleansing room. Each of the hospitals have two nurses, and the syphilitic wards and cleansing rooms, one each, who receive wages for their services.

The centre house contains a chapel and school-room, as before mentioned. There is public worship every Sabbath in the chapel, and the sacrament is administered monthly, as in other churches. The clergyman, who officiates, is employed

by the town, and receives an annual salary.

The children of both sexes, who are old enough, (amounting to fifty or sixty in number) are sent daily to the school room, and there taught the first rudiments, by a master and mistress, who receive a stated salary for their services.

The whole establishment is under the direction and superintendance of twelve gentlemen, who constitute the board of overseers of the poor of the town of Boston.

The house is visited by one of the overseers every day, Sundays excepted. These gentlemen perform their duty in rotation.

His Hon. Wm. Phillips, Redford Webster, Thomas Perkins, Samuel Snelling, Wm. Mackay, Joseph Cooledge, Jun. Joseph Richards, Jonathan Phillips, Samuel May, Edward Tuckerman, Jacob Hall and Saml. H. Walley, Esqrs.

Number that have died annually, for the last ten years, in

the Boston almshouse.

1808	68
1809	72
1810	79
1811	90
1812	79
1813	116
1814	74
1815	108
1816	96
1817	170

Total.	952

The house has been unusually full the last year—and, notwithstanding, the number of deaths have been greater than in any preceding years, it now contains nearly five hundred subjects.

Remarks on Insanity, by GEO. PARKMAN, M. D.

[Communicated for the New England Journal of Medicine, &c.]

DURING the PARLIAMENTARY INQUIRY,* the increase of insanity, in Great Britain, beyond that of population, was

* This developed faults in neglected institutions. But the healing art applied to insanity has ever furnished illustrious examples of men, indefatigably, feelingly, and enlightenedly devoted to their toils, discouragements, responsibilities, privations, and perils. I here publicly express my obligations to that head of Psychological science, M. Pinel, to whom I was indebted for seven months' welcome access to the theatre of his labours, an asylum of 800 insane females in Paris. His ripened years, 73, enjoy double experience in M. Esquirol, his colleague and former pupil, conductor of an excellent asylum for 20 insane persons. Ideas resulting from M. Pinel's experience gain additional force by passing before another intelligent, vigorous examiner. Had I not otherwise occupied much of this number of the Journal, I should refer to numerous similar obligations, in performing a sort of promise I made in a letter to one of the Editors, published

mentioned without reference to the fact, that when insane persons become objects of public attention, their number is better known. The same was mentioned in some parts of France, when asylums were enlarged or improved there, on account of the advantages of public over domestic management: also when an asylum near Philadelphia was proposed, 1810, and New York asylum, 1808. In Massachusetts 289 male, 252 female insane persons have come to my knowledge.

ANALOGY BETWEEN SANITY AND INSANITY.

Some insane persons having exhibited wonderful changes from their ordinary state and conduct, insanity, according to the common notion, divests its subjects of the properties common to man, and represents them under states and ailments, opposite from our common nature. To these, specific management and medicine are thought necessary: till they are discovered, the subject is in a mystery thought to warrant the vaguest speculations.—Consideration of the most striking extravagances of insanity in connexion with phenomena of sanity analogous to them, shows sanity and insanity are homogeneous, differing but in shades.* Many bereft of reason are like children not having it mature. - Some are not unlike people fallen from eligible situations, who persist in notions fitted only to their former stations; E. G. heads of families, accustomed to command, are unwilling to consider themselves under direction. Aversion from society, desire of retirement, is seen in the sick, as in some insane persons. - Agitating the fingers, feet, head or or body, muttering, humming, whistling, singing, biting the nails, among sane people, often seem analogous to the violent motion and raving of insanity, and resulting from a mind unfixed, or trying to divert itself from unpleasant objects. - A person in ill humour strikes his horse, dog, servant or child, or is cross. Some insane persons, when an unpleasant idea enters their mind, outrage their attendant. In neither instance does there appear hostility to the aggrieved party, but uneasiness of a mind too

partly in the Journal Jan. 1813, and copied into Lond. Med. and Phys. Journ. Jan. 1814, refering to a descriptive account of such asylums for insanity in the British empire, France, Italy, and Switzerland, as are most likely to offer themselves to the medical traveller's inspection. Outlines of this account, embracing 94 separate receptacles for insanity, were presented in manuscript to the Trustees of the Gen. Hospital, before their asylum was planned.

^{*} See also "Management of Lunatics, with illustrations of insanity by Geo. Parkman, M. D." p. 6--7.

insensibe of relative duty. Hence the importance of invariably

enforcing this duty.

Some insane persons see confusedly, like one half asleep, drunk, or dizzy; in reading, letters seem to run into each other.—Some invalids pick things from the street, and mortar from walls, and eat them; a singularity of appetite apparently analogous to that in which insane persons refuse common food, et excrementa sua vorant.

Inactivity of the will, and indecision, often exhibited by sane people, form principal points of treatment in melancholy. Dr. Gall told me of a mother, who said she felt an almost irresistible impulse to kill her children. She several times carried one of them to the river, momentary horrour restrained She sometimes sharpened knives and put them under her pillow. Her husband, esteeming her a pious and affectionate mother, treated her anxiety lightly. Dr. G. advised her to absent herself from her family, as soon as she should first feel the approach of these attacks. Daily other instances occur which, though not designated specimens of disordered intellect, no more than transient uneasinesses are called sickness; yet, though generally subsiding spontaneously, or without great curative means, may be the nucleus of great mental ailments; E. G. staying in bed late, when we wish ourselves out of bed, and make fruitless efforts to quit it: also at the fireside, at table, and in pleasant society. In anger we sometimes use expressions and actions disapproved by our experience and the looks of those about us. In high spirits we sometimes act so sillily and extravagantly, even friends half amused pleasantly call us light-headed, half-crazy. Then we say-resentment, or pleasant ideas overpowered us. - So insane persons sometimes say-I could not help it .- They . sometimes beg to be restrained, to supply self control. In situations seeming partly bereft of motives to excite the will, see the idlepess of the rich heir, the listlessness of the pauper who finds near him no means of employ immediately adequate to his need. A man without business paces his room to employ himself; he sees in the glass his face indicating a void of pleasing emotion. His unoccupied mind is ready for any impressions, and imagination is at leisure to modify them. Here seems to be the beginning of many cases of hypochondria, for the subsequent history of which see "Management of Lunatics," p. 12, &c.

Almost every body is occasionally indifferent to life, specially in nauseating and depressing diseases. Should they then be in situations of great facilities for suicide, an attempt would not be surprising. People on an eminence feel strong propensity to

leap down. Similar states appear in cattle, when their barns take fire; and in birds charmed. Suicide by poison, drowning, shooting, throat-cutting, sometimes occurs when the individual chances to meet with poisonous substances, to be near the water, to be using fire-arms for common purposes, or when he shaves; though a walk to the water, sporting, and shaving are often resorted to to effect suicide without exciting suspicion. The former suicides seem in a degree accidental, being to premeditated ones as manslaughter to murder. Some are purely accidental, as when a sleep-walker, or an insane person leaps from a window, believing he is on the lower floor; not having reason enough to foresee danger, may do most hazardous and fatal acts, without ill intent. See also "Management

of Lunatics," p 8, l. 9.

Coincidence of suicides is frequent, specially among friends and persons similarly situated. Knowledge of such acts seems too horrid for some persons' consideration; the impression so fixed, they kill themselves, apparently to be rid of it, as some convicts ask immediate execution, to save consideration of death; or as some patients, almost distracted in expectation of a surgical operation, are firm in suffering it; or as some shipwrecked people leap into the sea, rather than view probable destruction. Werter determined to destroy himself to be rid of an idea he had conceived of murdering his friend and her * after the suicide of his bosom friend, being several times accused of attempting to follow his example, said—though the world presented to him but little to live for, his friend's suicide had so painfully affected him, there was no danger he should follow his exmple.—He shot himself six months after his friend, holding in his hand a prayer for a person in the agonies of death. I know other analogous

Repeated suicides occuring in a family are often imputed to hereditary insanity, without reference to the circumstances above mentioned.

Of 95 suicides in and near Boston, 19 were committed by females. Persons seeming disposed to suicide should be kept from objects likely to excite the disposition; manifestations of it are to be met by management tending rather to divert it from its purpose than to thwart it. The following narrative I received from a physician to whom Dr. W. communicated it.— The King proposed one day to shave himself. Dr. Willis feared to hesitate in assenting, lest he should seem to suspect intended suicide, and give the King dangerous notions, of the pre-existence of which there was no certainty. Dr. W. called

for the razors, and in the mean time engaged him about some papers on the table. The razors were put on the same table, he still attended to his papers, which encouraged Dr. W. to believe suicide was not intended. After shaving, the King returned to his papers; the razors were not removed immediately, lest Dr. W.'s anxiety about possible mischief should

appear.

Propensity to suicide has repeatedly seemed arrested by strong counteracting impressions. * * tried to leap into the neighbouring sea. As she passed, a tub of water thrown on her, producing a vivid impression, attracted her attention from her purpose, she ran back shivering, and never repeated such attempts. Cheerful scenes gave her only transient diversion; the contrast from them she found in her situation depressed her. I showed her the interiour of the almshouse; the distressed objects here convinced her she was not "the most wretched in the world" as she called herself. Few persons rightly value their advantages, not knowing others' sufferings. Most men think more of their troubles than if they knew others'. Cheerfulness often irritates melancholics, as singing and levity is offensive to some people occupied by thought.

Lord M. requested our distinguished artist G. Stuart, to paint a portrait of his brother, Capt. C. P.—S. availed himself of much familiar intercourse with P. to witness in him those variations of countenance, which best exhibit characteristic animation.—M. saw the portrait, and exclaimed, "it is not my brother, it looks like an insane man!" In consequence, S. had another sitting; M. saw the portrait again, and exclaimed "it is yet more like an insane man!" Three weeks after, P. shot himself. This, which might be thought the result of momentary impulse, seems a consummation of a mind in which disease had

accumulated: insanity seemed to show its early stages.

Sensibility, and insensibility, to heat and cold. In some persons of great energy, vital heat seems superabundant. They wear no great coat, under-dress, gloves, or boots; sleep on a lightly-covered mattrass, open the window at rising, dress and undress in the cold, use cold bath in winter. Charles x11. of Sweden is said to have slept in mid-winter in Norway, in the open air, on straw, or a plank, covered only with a cloak. Another warrior is said to have harangued his army an hour in the streets of Warsaw, clad in white dimity. I know no insane persons' resistance to cold, more wonderful than is exhibited by mariners on our coasts. Sometimes in our coldest nights a wave cases them with ice, when they dare not Vol. VII.

quit duty a moment. Their resistance seems to depend on strength with mental energy excited by danger; in insanity, by a real or supposed state of things exciting energy. Security from cold seems to depend partly on the same mental principles by which some persons are unhurt among apparent contagion.

Others, with the various preservatives of heat, are chilly, and pass the winter in trying to be warm. In some, insanity is so depressing, and inactivity so great, their susceptibility of cold is not strange. Hence the importance of encouraging * activity in them. 17, had his toes frozen a very mild night, middle of Oct. in a close room 6 ft. sq. He gave no previous intimation of suffering. Two others died, apparently chilled to death, Oct. a year before, in a warmer climate, the weather very moderate. Some will not be clad, others inadvertently kick off the bedding. If crawling infants play as long as they please in parts of a room distant from the fire, in severe weather, their fingers, ears and nose will be half-frozen, without interrupting their pastime. Intermittent fevers present opposite extremes of temperature showing little connexion with atmospheric influence.

Some who have been insane and relieved never recover their force of mind, as some who have had bodily disease never recover their firmness. Those who have been insane are very susceptible to exciting causes, as those who have had bodily disease.

* * * had an epileptic fit at a lecture in C. When it had subsided he knew not the place he was in, nor how he came there. Presently he remembered, in the order of occurrence, coming to C,—for a lecture,—entering the chapel,—the prayer,—text,—introduction of the lecture.

Painful dreams seem to result generally from baneful habits,

ill health, or a mind disturbed when awake.

CAUSES.

In taking charge of insane persons, their friends' conjectures of the cause of the ailment have sometimes been given me. In 33 cases, physical causes have been mentioned; in 29, moral.

With the origin of each of at least 24 other cases, physical

and moral circumstances seemed intimately connected.

At least 33 cases imputed by friends to hereditary influence have been presented to me;

2 others combined with other or additional moral circumstances.

1 ,, ,, ,, ,, physical ,, 3 ,, ,, ,, ,, ,, ,, and moral ,,

Any exciting or depressing cause, acting on persons predisposed to insanity, may be followed by action of the predisposition. This remark seems applicable to some cases of insanity imputed to avarice, disappointed love, and religious enthusiasm.

Three insane persons have been committed to me, because their presence showed injurious effect on some of their family. A person told the physician of an asylum I visited,—with a near prospect of marriage, he thought of one or two instances of insanity among his relations, he had painful doubts as to the propriety of fulfilling his marriage contract.—He now inhabits that asylum, perhaps from dread of insanity, from painful scruples, from disappointment, from reproaches or suspicions of his intended relations, aggravated by maniacal predisposition. This is not a solitary case.

In eight cases insanity was imputed by friends to intemperance in strong drink.—In five others, before decided insanity, intemperance and other circumstances physical and moral coexisted, apparently conducive to insanity.—In three others, intemperance coexisted with moral circumstances; which I believe frequent; intemperance destroys property and estimation, and begets disappointment, despair, &c.; strong drink is often resorted to, to exhilarate depressed minds.—In three others, hereditary and moral circumstances coexisted with intemperance.—In another, hereditary with intemperance.

Some persons, habitually temperate, previous to exciting suspicion of insanity show propensity to strong drink. Is not

this an early effect of their insanity?

Some persons after long intemperance may be debarred from strong drink. Others may be supplied from a set of vessels the capacity of which lessens in almost imperceptible gradation; or by diluting the draught; or by less stimulating sort of drink. I have satisfactorily substituted nice coffee, or strong hot mint tea, or high-seasoned solid food. A child had got into use of opium at night. I occasionally lessened the opium a quarter, without his knowledge, and added rhubarb to preserve the accustomed size of his pills. He always discovered the difference.

Six cases imputed to religious enthusiasm have been presented to me; one of them combined with disappointed love, another with disappointed love and hereditary influence, another with other moral causes, another with physical causes.

Dr. Wistar, one of the Friends, told visitors to Pennsylvania asylum for insane persons,—insanity among the Friends seems

often imputable to unduly active imagination exerted about the divine spiritual faculty they specially believe communicated to men, independent of intellect. Inactivity of the will, or inaction of other mental principles has been exemplified in convulsive epidemics among Methodists.

A person has been presented to me insane apparently from "home-sickness." Those -seem most exposed to it who have been accustomed to industry, temperance, domestic enjoyment, retirement, and scenes peculiar to their home. They generally

try to hide the source of their uneasiness.

Insanity after bodily diseases seems often imputable to them; to anxiety as to their event; to affairs embarrassed, or supposedly embarrassed by them; to shame, when they rise from beginning vice; to premature return to accustomed occupations: all these aggravated by susceptibility increased by disease. Insanity after childbirth should be viewed in connexion with the changes consequent on sudden removal of distention and weight; new secretion and discharge, with their causes and consequences; sudden joy, relief from anxiety; sometimes disappointment and new anxieties; exertions induced by friends' congratulations. Of insanity apparently from more or less of these combined causes, at least thirteen cases have been presented to me.

A person with great irritability, impaired memory, unpleasant dreams, shame, doubt, discouragement, and sense of moral depravity, asked if his disease did not tend to weaken his intellect: if I did not think he had less sense than others? I asked as to his success in life. "He had prospered the last two years." I named to him one of his acquaintances, who had not prospered, yet thought well of himself. I concluded, apparently to his satisfaction, my patient had most sense of the

two.

Many cases of insanity, imputed to intense study or bodily labour, occur under exertions conducted in ill health, prejudicially, or about objects perplexingly various, doubtful, or distant in event; then, study and labour show no necessary connexion with insanity; they generally seem highly preventive and curative of it.

Besides the general apparent agency of climate, and change of seasons in causing disease; lassitude opposed to salutary

exertion attends people exposed to warm seasons.

To investigate thoroughly the causes of insanity, we must consider those pursuits of men which prevent full action of the intellect, also the general destitution of fixed principles, and the insubordination specially of the young to their natural

guides. It may be necessary to fix a general period, styled the season of discretion; this ought not to be acknowledged when it proves false. As soon as an individual shows insensibility or disregard to the safeguards of his estimation or property, whatever be his age, it is the natural right and duty of those most interested in his welfare to seclude him from objects, which apparently excited and maintain his delusion. If they scruple to do it, they are responsible for his consequent derangement or vice, the probable results of undirected minds impelled by excitement. See also "Management of Lunatics," p. 30, l. 16, and p. 8—13.

To ascertain existence of insanity or feint of it, unless the examiner's object be concealed from the patient, the enquiry must be extensive.

A physician in this town asked me to see a female in his house, whose conduct was strange. He doubted whether her strangeness was involuntary, or assumed since some domestic crosses. I went to her chamber on pretence of seeing the house with a view of hireing it. Being left with her, I asked why she put her hands to her head? "She believed she had lost her head!" From such expressions, and from her general air, I concluded she was insane or knew how to feign insanity. The first was true.

The strongest evidence I know of certain changes in msane persons, at certain lunar periods; is in "De l'influence de la

nuit sur les maladies, 231-235. à Bruxelles, 1816."

RESTRAINTS.

See Management of Lunatics, &c. p. 26-2-26-3

I know no sure proper means of confining the upper extremities of ingenious patients, perseveringly impatient of restraint, but a canvass-strait-jacket, the lower parts of the arm-pockets sewed very strongly, the back held together by buckles and wide straps, the bottom secured round each thigh by a strap or string.

The following means may be exactly proportioned to extravagance or resistance, and are less heating and irritating.—
To confine the fingers, thick leather mittens without thumbs, the palms covered with sole-leather, the mittens secured round the wrist by a wide and strong strap, with a metallic ring, through which a cord may pass, to hold the hands behind.—
In sitting and lying, the hands are kept in front by a cord

passing through a staple in the floor near the feet.—To confine the ankles, similar straps, the cord through the rings passing through the staple.—To confine the breast, a strap round it and the back of the chair.—To confine the thighs, a strap round each of them and one of the chair's hind legs. The chair is fixed.

When restraints are easy, and exclude idea of escape, irritation and revenge consequent on painful restraint, and risk and uncertainty are prevented, and the sufferer is impressed with the advisableness of submission, and with respect for Directors able to accomplish judicious measures. Restraint, unless conducted with judgment, is likely to increase fury, excite hate, revenge or despair. Each patient's situation and relations in life are to be considered. Whatever peculiar measures are advisable are to be executed with a persuasively commanding tone of conscious power, and without a chance of exciting ludicrous ideas.

Properly constructed double apartments for each patient present most efficient and easy means of requisite general restraint and quiet. See plate described in "Management of Lunatics, &c." p. 27—30. In Mass. asylum for insane persons the window-sashes are ash,—glass, 6 in. by 3, 24 panes,—stiles and top-rail 2 in. sq.—bottom-rail 2 by 2,—meeting-rail 1½ by 2,—intermediate bars 2 by 1. Upper sash falls, lower sash rises 7 inches. Room-doors are fastened by a mortice or box-lock or bolt, kept in its place by a spring, and moved by an arm attached to the tumbler which is turned by a square socket perforating it to receive the key. The box is 3 in. sq. 3 in. thick.

MEDICAL TREATMENT.

Of the action and state of the brain and nerves during life, as of many internal parts, we know but little. Their minute structure shows their functions but imperfectly. The time of commencement of morbid effects and peculiarities apparent on dissection cannot often be known, nor the connexion between them and insanity, nor whether many of them have not taken place since death, or are consequences of previous affections not now apparent. Insanity like other diseases sometimes leaves no visible traces after death.

In what part of the system disease begins, in any ailment, we seldom know. Its primary symptoms are seldom noticed. It first excites attention generally by several coexisting phenomena interfering with the individual's comfort, and apparent-

"derangement" be a primary affection, but little can be known from the sufferer's account of its origin. When bodily ailment precedes insanity, we seem to have more light at first: but we cannot, from the sufferer's experience, trace the steps by

which physical ailment blends itself with intellectual.

In a system intimately connected, affections are participated according to each part's susceptibility. Some parts, remote from the apparent or supposed original seat of the morbid action or affection, are sometimes more pressingly disordered, and seem first to ask aid. The healing art consists often in seizing these indications and relieving such parts: renovation is thus participated through the system, and satisfactory results follow the judicious physician's labour, characterized by energy and patience, though often by doubt. Health consists in the due action of each bodily organ; what plan is so likely to cure disease, as that which tries to restore each organ to its accustomed action, in the order of apparent severity of its respective ailment? The records of five lunatic asylums give together 5351 admissions, 2792 cures. Even idiots have acquired or recovered some reason, after a steady course of judicious discipline; many such cases seem attributable to baneful habits, or mismanaged insanity.

Few bodily ailments presented in insanity seem-essential to it. They are as various as the symptoms of other disorders,

and resemble them.

Medical applications should be made in a manner least likely to obstruct the system's tendency to spontaneous changes, generally salutary, to which physicians are often indebted for "the triumphs of art." Imitations are attempted of these changes. We know but their external marks or their effects. Our production of some appearances like nature's may be mistimed, injurious, and is not likely to be attended with such combination of circumstances as precede natural changes, and

without which similar effects are not to be expected.

It is not unlikely the disease will not prove transient; it may be very long, very violent; the physical powers may be exerted by it to their utmost, though they may now seem equal to great exertions. I have been told by patient's relations, "we have no hope of relief for our friend, but from a process by which his maniacal vigour shall subside under general prostration."— Diseases often seem changed, suspended or cured by agents producing powerful effects of any kind on the habit. Before presuming to introduce this new state of things, we should understand its nature, and consider well whether it may

not be more immediately dangerous than that to which it is opposed; naturam expelles, usque non semper recurret.' This is the province of the enlightened and experienced physician, who alone can perceive nature's feeble and almost stiffled indications; await patiently the result of her suppressed efforts; judiciously essay artificial treatment, when she seems irrecoverably prostrated; and unbiassedly stand ready to observe the juvantia et ladentia, to meet his perplexities pro re natâ. See also "Management of Lunatics, &c." p. 22.

Daily discharge from the bowels seems indispensable to good success: for this, laxatives seem best, as they leave the bowels a chance of resuming their functions. Inordinate action of the bowels induced by purges is followed by corresponding inaction; this renders necessary a repetition of the purge, &c.

If under use of mercury as a laxative, mercurial action appears, its worth as a remedy will be known. I have seen thin persons, one of them insane, emaciate irrecoverably under unsuccessful attempts at salivation. (Obs. p. 129.)

The case in p. 122, l. 11. was very severe; it presented no mark of amendment till after the injury: from that time it began to mend, in four months it recovered. The irritation, and discharge from the feet seemed highly useful. A great

variety of analogous cases show the same.

A labourer, under most severe erysipelatous inflammation of his face, his eyes and ears closed, was uninterruptedly delirious, fancying himself lifting heavy bales, made corresponding exertions, and sweated profusely. Thinking this would soon exhaust him, I thought it necessary to change the train of his ideas. Thinking nothing likely to do this but a most vivid physical impression, I produced a great irritation on his crown; he did not recur to his delusion, and became in a situation to receive remedies to which his restoration seemed owing.

A slender female, uninterruptedly delirious, constantly stamped with her feet. To interrupt this exertion, threatening to enfeeble her irrecoverably, I advised blisters to her soles. I have given similar advice, when this seemed preferable to other restriction, for patients disposed to run away, kick, or strike.

Some foreign medicines used in insanity have been shamefully adulterated; others, even of domestic origin, mistaken. Hence, and from the diversity of disease, and of the physical and moral management of patients, rise some discordant account of medicines.

Much advantage has been attributed to the warm-bath, at 82° to 88, combined with the douche, i. e. the patient, under excitement, being confined in the warm bath, by a wooden cover to the tub, with a notch for his neck; a stopcock from a reservoir above is turned, so cold water falls on his head by drops, or in a small stream. The falling water is generally an object of terrour. Perhaps a vapour-bath, described in Lond. Med. and Phys. Journ. No. 25. may serve for the warm bath.

OBSERVATION.

'Calomel shows but little effect in remedying the diseased habit of children much under the age of puberty, and of some others. Invariable recovery from acuté disease under salivation, seems to show only the mildness of the disease. In a fatal epidemic, it was proposed to consult a physician who "never lost a patient in this disease." But it was thence concluded, his experience in the present malignant form of the disease was quite limited, invariable success being incredible in extremely severe cases, such as in the experience of his equally enlightened brethren, only illustrate the dreadful historyomne ruit in pejus. La médecine, dans plusieurs cas, a des bornes très-circonscrites qu'il n'importe pas moins de connoître que ses ressources La connoissance des cas d'une incurabilité absolue ou relative tient autant aux progrés de la science que celle des moyens de guérir. The next useful knowledge to that of curing disease is seeing why cures should not be expected. This is the mark of medical learning contrasted to boasting and empiricism.

Of four cases, in one house, in which the usual evidences of mercurial action were in vain sought, three presented uninterruptedly most severe symptoms, excruciating headach, strange rapid convulsions particularly of the mouth and throat, with a noise like that of frogs; deep delirium. Two of these patients, I assiduously watched in conjunction with their experienced and enlightened family-physician, and occasionally with another veteran of our profession. The third was a servant under the direction of a physician he had previously consulted. In these three, vesication, specially of the head was thoroughly effected. The fourth, of a slender habit, and pale was early removed, from the house in which his disease began. He could scarce support himself, was indifferent to surrounding objects, and extremely emaciated. I had no expectation of his recovery. No medicine seemed indicated. On account

of his feeble state he was kept in quiet, and fed with light food, as rice, coffee and tea, adapted to his palate, to his inactive state, and to the feebleness it was thought his digestive organs must share with his general system. He recovered, but he was under the effects of disease many weeks.

On the Reciprocal changes which take place in the blood and in the air, in Respiration; it being the Prize dissertation upon that subject, for the year 1813. By E. Hale, Jun. M. D.

[Communicated for the New England Journal of Medicine, &c.]

HE composition of the atmosphere is so well known that L at first view, it should seem an easy matter to discover by direct experiment what changes it undergoes in respiration. The air may easily be examined before, and after it enters the lungs. But, the inferences from such an examination are liable to much uncertainty. It is impossible for a person to breathe naturally while his mind is attending to the process. If he do no more even than to enumerate his inspirations, his respiration soon becomes laboured, and he feels the necessity of a deep inspiration to relieve a sense of oppression at his lungs. Hence it is an unfair presumption, to conclude that the results of such a respiration are precisely the same as those of a natural one. The uncertainty arising from this cause would be much less, were it true that the same portion of air which is inhaled at one inspiration, is expelled at the next succeeding expiration. But this is far from being the case. The quantity of air which remains after a complete expiration is much greater than that inhaled at an ordinary inspiration. The fresh air inspired is therefore mixed with what was before in the lungs; so that any variation in the fullness or quickness of any part of the respiration necessarily varies the qualities of the air expired. By continuing the experiment, so as to subject a large quantity of air to examination, as was done by Messrs. Allen and Pepys, the difficulty is in some measure obviated: yet even they were not able to remove it altogether.

It will be proper therefore to inquire into the chemical properties of the fluids brought together in respiration. By estimating the natural results of their affinities, we shall be enabled to judge in some degree of the correctness of inferences derived

from experiments.

These fluids, it is well known, are on the one part, atmospheric air, consisting of Oxygen, azotic, and a small portion of carbonic acid gasses; and on the other the venous blood, whose elementary principles are oxygen, azote, hydrogen and carbone, with a small portion of iron, phosphate and carbonate of lime, &c.

The azotic and carbonic acid gasses have neither of them, in their natural state, any affinity for either of the elementary ingredients of the blood. Their properties, so far as respiration is concerned, are purely of the negative kind. Oxygen gas has a relation to azote, hydrogen, carbone and iron.—The only productions therefore, which are purely chemical, that the nature of these elementary principles admits of, are nitrous gas, nitrous oxyd, nitrous and nitric acids, carbonic acid, water and oxyd of iron. The combinations of oxygen with azote, have never been suspected, and cannot be supposed, to exist among the results of respiration.

Thus it appears that water, carbonic acid, and oxyd of iron are the only supposable products of respiration; so far as it is

a mere chemical operation.

I am sensible it has been common to consider the blood as in some respects a simple fluid, capable of possessing affinities of its own, independent of those of its ultimate principles. This may undoubtedly be correct in regard to the living actions of the body. But its chemical properties necessarily depend on those of the substances, of which it is composed. When submitted to examination, it may soon cease to be blood; but its nature, as a chemical fluid is not altered, unless by new combinations among its elements. Although its proximate principles are easily destroyed, its ultimate ones are constant; and its relations may as readily be inferred from the nature of the substances which enter into its composition, as those of any other fluid.

There does not appear to be any combination among the substances composing the blood that will materially alter its

attractions for atmospheric air.

All the oxygen of the blood is probably intimately united with other substances; but none of its combinations possess any attraction for either azote or carbonic acid. The iron of the blood is already oxydised at least in some degree; consequently is capable of receiving only a smaller quantity of oxygen from the air. Hydrogen and carbone when united are too easi-

ly separated to prevent their combination with any other substance. None of these combinations therefore affect the inference derived from the nature of the elementary ingredients of the atmosphere and venous blood, that the union of oxygen with carbone, hydrogen and iron, are the only supposable

chemical effects of respiration.

The French chemists, after discovering the phenomena of combustion, readily conceived respiration to be perfectly analogous. They had found that in the former process, oxygen combines with combustible matter, giving out its carbonic; and in the latter, they perceived oxygen gas to disappear in the lungs, at the same time that heat is produced. Hence they

concluded, that respiration is only a slow combustion.

It is not surprising that this opinion was so generally received, when we consider the time in which it prevailed. The discoveries in pneumatics which raised chemistry to so high a rank among the sciences, had just been made. Almost every man who made any pretensions to chemical knowledge, was enthusiastic in speaking of the wonderful properties of the gases, particularly of oxygen. The virtues attributed by the alchemists to the philosopher's stone, could hardly be more extravagant than those, which this gas was imagined to possess. The simplicity of Lavoisier's theory of respiration was also captivating, at a time when the minds of physiologists were worn out with the complex systems of former philosophers.

Had it not been for the belief of the importance of oxygen to the blood, the arguments in favour of the opinion, that it enters that fluid from the atmosphere, could hardly have gained so much confidence. Even the analogy, which has been supposed to exist between respiration and combustion, favors a different theory, at least, quite as much as it does this. In combustion, although oxygen combines with the combustible matter, yet only a small proportion of the products remains in a fixed state; much the greater part flying off in vapour and

gases.

In like manner, if we were to attach any importance to this analogy, it might be supposed that the results of the combinations of oxygen in the lungs are such as to pass off with the expired air, rather than such as should remain in the blood.

We have seen that carbone, hydrogen, and iron are the only substances in the blood that can be suspected of exerting any action on atmospheric air. Of these only the last would yield a product by combination that should retain its oxygen

in the blood. Water, if formed, might indeed become fluid and not be expired in vapour. But as a large quantity of vapour is expelled, at every expiration and as the fluidity of the blood is sufficiently insured by other means, this would render the operations of nature unnecessarily complex, without pro-

ducing any adequate advantage to the system.

The quantity of iron in the blood is exceedingly small; and this already oxydised in a greater or less degree, before it enters the lungs. It is well known that this metal imbibes oxygen from contact with watery fluids much faster than it does by mere exposure to the air, and that the blood contains a large proportion of water. Why then should we resort to the unnatural conclusion that iron, when intimately combined with this fluid, is in a low state of oxydation; but upon exposure to the air passes immediately to a highly oxydised state? Indeed were this actually the case, the quantity absorbed would be so small as hardly to be worthy of notice in estimating the effects of respiration. But from the view I have taken of the subject, it does not appear that even this small quantity of oxygen passes from the air to the iron of the blood in the lungs. The change of colour in the blood has been regarded as evidence of the addition of oxygen to the iron in respiration. But before this can be allowed, it ought to be proved that the blood really owes its colour to the oxyd of iron it contains.

I cannot avail myself of Mr. Ellis' arguments upon this subject; for he seems to forget that the question is not whether oxygen gas enters the blood, in the state of gas. Under this mistake he contends that as the absorbents will not take up air, or if they did, they would carry it to the right, and not to the left side of the heart, oxygen gas cannot be supposed to enter the blood.* There appears to be however, not only no evidence that oxygen does enter the blood, but evidence sufficient to show that it does not enter it. I have already detailed that which is deduced from the affinities of the substances composing that fluid, and the atmosphere.

The results of experiments on respiration equally confirm the same opinion. It was long ago observed that the only change, perceptible without chemical tests, which the air undergoes by a natural respiration, was a small diminution of its bulk. This diminution however was not found by Dr. Priest-

^{*} Ellis on Air, Vol. I. page 116 and seq.

ley and Dr. Crawford when small animals breathed air, confined over mercury. Hence the inference is unavoidable that a portion of air was absorbed by the water when similar animals breathed over this fluid. When man is the subject of experiment, the additional force required to throw the air into a vessel, and the weakened state of the respiratory muscles, occasions some of the air to be retained in the lungs. There is always a sense of fatigue and debility attending such a respiration, which shows that it is not completely performed.

The extensive experiments of Messrs. Allen and Pepys decidedly prove that such are the causes of the seeming disappearance of a portion of the air respired. When large quantities of air in each experiment were breathed by themselves, the deficiency in the expired air was extremely small, amounting sometimes to but little more than \(\frac{1}{1000} \) part; and in one instance there was an actual increase. But what particularly deserves consideration, the apparent loss of azote was always proportionate to that of oxygen.* They afterwards made a Guinea pig breathe a long time, in two experiments when there was no alteration in the volume of the air respired, and once one cubic inch was gained.† As an equal volume of oxygen gas is consumed in the formation of a given quantity of carbonic acid gas, no oxygen could have entered the blood in these respirations.

Dr. Crawford, concludes that one sixth part of the products of the combinations of oxygen in the lungs is watery vapour. But since it is known that a large quantity of vapour is produced by the exhalent vessels of the lungs, it is more natural to suppose that all which is expired is thus secreted from the blood. The experiments of Messrs. Allen and Pepys seem decisive in proving that none is produced by the combinations of oxygen with hydogen. Those of Dr. Priestley and Dr. Crawford, to which I have before referred, confirm this opinion. In these cases as there was as much carbonic acid gas produced, as there had oxygen gas disappeared, and as an equal volume of oxygen gas is required, to form carbonic acid, none

of course could go to the formation of water.

The chemical affinities of the substances concerned, do not afford any thing decisive in determining whether or not, water is formed in respiration. We are not indeed acquainted with any process in nature, where hydrogen unites with oxygen, at so low a temperature as that of the lungs; although carbone combines with it at a lower temperature, particularly in the

^{*} Philosophical Transactions for 1808, part II. † Ibid. for 1809, part II.

process of fermentation. But this fact only renders carbonic acid a more probable result of respiration than water; for we are ignorant of the influence which the living principle may have on chemical attraction. We need however hardly regret that this evidence is so incomplete, if we may rely upon the experiments of Messrs. Allen and Pepys, confirmed as they

are by those of many other gentlemen.

Thus far, I have taken it for granted that the relative situation of the air and blood in the lungs is such as to admit of the action of their chemical affinities. I am aware that this opinion has been strongly controverted. Mr. Ellis contends that, "to the operation of chemical affinity, a degree of absolute contact is required, which may, and does exist between air and venal blood out of the body; but the intervention of the coats of the cells and blood vessels altogether forbids this necessary condition in the lungs." "The supposition, that the coats of these vessels and cells are so thin, that, when moist, they allow the air, or its oxygen gas, to pervade them, is wholly gratuitous, and in opposition to the results of direct experiment."* It is very observable that Mr. Ellis here labours under the mistake I have before mentioned. Under this false impression he strives hard to prove that aeriform fluids cannot pass into the blood vessels. But it is not pretended, and I believe never has been, that either "the air, or its oxygen gas," passes through the membranes of the lungs, in the state of gas. Every writer, † upon this subject, whose works I have seen, makes the obvious and important distinction between the base of a gas, and the gas in its aeriform state. It is the former which has been supposed to pervade the thin membranes of the lungs.

In no book but that of Mr. Ellis himself, can I find the absurd proposition, that "by superior affinity the blood abstracts air through the coats of the cells and vessels of the lungs,—and again giving out nearly the whole of this air, through these same blood-vessels and cells." All that is contended for is, that, notwithssanding the intervention of these thin coats, the air and blood are so circumstanced as to be capa-

* On Air Vol. I. page 125.

[†] I have not seen Sir Humphry Davy's "Researches into the nature and respiration of Nitrous Oxyd," to which Mr. Ellis so often refers; but it is manifest from his quotations, that Mr. Davy made the same distinction between the use of a gas, and the gas itself.

ble of exercising the same attractions in the lungs, as they

would out of the body.

It is evident that the carbone of the carbonic acid expired, is derived from the venous blood. How is it separated from that fluid? Mr. Ellis says by the vital action of the exhalents of the lungs. His words are, "these exhalent vessels of the lungs, -appear to be endued with a power not only of exhaling water, but also of emitting carbone;" * and again "the carbone supplied in human respiration, is truly an animal excretion, carried on by the exhalent vessels of the lungs."+ But if this be the case, why is the presence of oxygen in the lungs absolutely necessary to the continuance of life? It is well known that unless some gas containing oxygen is constantly respired, carbone is not separated, but the venous blood passes unchanged to the left side of the heart. Does the carbone after being in a measure thrown out of the living system into the air cells and bronchiae, return back into the blood when there is no oxygen to carry it away? Why is it not expired with the watery vapour by which Mr. Ellis supposes it be held in solution? ‡.

These considerations, I trust, are sufficient to show that Mr. Ellis's opinion cannot be correct. We recur therefore again to the question, by what means is carbone separated from the

venous blood?

The principal argument against the operation of chemical affinity is that the air and blood do not come into actual contact. Let us then examine the validity of this argument.

It is a part of the definition of chemical attraction, that it takes place only at insensible distances. If this definition be rigidly adhered to, I grant, it cannot strictly be said, to be exerted in the lungs. But it is not the name for which I contend. Changes are effected in bodies, not in complete contact, without any discoverable agency but their affinity, which are perfectly similar, in every known respect, to those which are purely chemical. This may not be the exertion of chemical attraction. Yet chemists themselves allow an extension of their rule in regard to the operations of Galvanism, much greater than is necessary to apply to our present purpose.

There is a kind of analogy between some of the galvanic operations and the actions I speak of, which may serve to illustrate the possibility of the latter. By the galvanic action, oxygen and hydrogen may be made to pass from the opposite poles of a battery; and the more fixed alkalies

^{*}On Air, p. 199. † Ibid. p. 200. ‡ Ibid. p. 173. and seq.

and acids, may be transmitted in an invisible state from one vessel to another at a considerable distance, with no other communication than a small wire. How much more readily may carbon be supposed to pass through the thin mem-

branes of the lungs.

But we are not left to mere probability to establish this point. Dr. Priestley found by experiment that venous blood became florid and emitted carbonic acid by the action of oxygen gas, though separated from it by the coats of a bladder scraped thin. Dr. Goodwin in some degree changed the blood in the veins of living animals to a florid colour, by direct-

ing a stream of oxygen gas against their coats.*

Mr. Ellis insists, that as the air cells and blood vessels are parts of distinct systems, there must necessarily be a greater distance between their contents, than there was in these experiments of Dr. Priestley and Dr. Goodwin. "If, indeed," he says, "air did permeate the bronchial cells, it would more readily pass into the cellular substance which connects them together, than into the pulmonary vessels." I answer, in his own words, that this "supposition is wholly gratuitous, and in opposition to the results of direct experiment." M. Bichat, speaking of forcing air into the trachea of dogs, says, "whenever air is forced into the lungs with a too great impetuosity, it occasions besides the passage of the fluid into the blood, its insertion into the cellular texture, where it spreads and produces emphysema of the breast, neck, &c. But if the impulsion is moderate, there is only the passage of the air in its natural state into the blood, and never a penetration of it into the cellular substance." The truth is, there is no cellular substance intervening between the coats of the cells and the blood vessels. Although they are physiologically considered as distinct from each other, yet they are too closely connected, and too delicate to be separated by the nicest dissection.

There is one other fact which in my view clearly proves the action of the chemical affinities of the blood and air through membranes, at least, as thick, as those of the air cells and capillary vessels. When the thorax of a dead body is opened, the lungs are found more or less filled with black

† On Air Vol. I, p. 125.

‡ Ibidem.

^{*} Goodwin on the connexion of Life with respiration, p. 32, Philadelphia Edition.

 [§] Researches, translated by Watkins, p. 248.
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blood. Let these lungs be freely exposed to the air, and in a short time the surface becomes florid.

These several cases prove pretty decisively, that the blood may act on the air by the force of its chemical attraction; and since the effects are chemical, and no other power has been discovered in the lungs, capable of producing such effects, I think it a fair presumption, that this is the power by

which the changes in respiration are effected.

It will be objected that the time, in which a respiration is performed, is too short for so much to be effected by such an agency. But it ought to be remembered that the air inspired is mixed with what was before in the lungs. All experimenters agree that these organs contain more than a hundred cubic inches of air, when they are in the state of expiration; while, according to Messrs. Allen and Pepys, Mr. Davy and others, not more than 16 or 17 cubic inches are inhaled at an ordinary inspiration. The air is retained in the lungs, therefore, during a length of time equal to the performance of at least six respirations.

Besides, it is no unnatural conclusion to suppose, that the powers of life may aid in rendering the chemical affinities more efficient. Although we have perhaps no instance in the human body, where these powers originate an action, without the assistance of either chemical or mechanical means: there are many, where they do much to modify, and give effect to these means. Of this, the process of digestion is a signal example. It is probable that the various secretions are also

effected in the same way.

Thus it appears that the only change which the air undergoes in respiration, is to receive a portion of carbone, which combines with its oxygen. That this carbone is derived from the venous blood, is manifest from there being no other substance in the lungs capable of affording it, and from the certainty that the same effect is produced on the air by that fluid out of the body. The change therefore, which the blood suffers, is giving off a portion of its carbone, at the same time that its colour passes from a dark to a florid red.

It is not to be forgotten that it is only in regard to its ultimate principles, that this change in the blood is known to take As to the proximate principles of that fluid we know not in what the change, so necessary to the continuance of life consists. Indeed we are unable to perceive any difference except in colour, in the physical properties of the venous and the arterial blood.

How the loss of a portion of carbone should so change the nature of a fluid, in which that substance is still a large ingredient, as that from being absolutely destructive to life, it becomes every way adapted to the various purposes of nutrition and secretion, is altogether inconceivable. Nor can we hope to be better acquainted with this subject till we know more of the state of combinations in the animal and vegetable fluids. We find a few simple elements compose an almost infinite variety of fluids, yet the difference of composition which constitutes this variety, seems beyond the limits of chemical research.

When we add to this, our ignorance of the influence, which the impressions of vitality may have upon the solids and fluids of the animal body, we perceive a wide chasm between what we do know, and a complete understanding of the effects produced in the living system, by the changes, which the blood receives in respiration. We know indeed that the venous blood is an improper stimulus to the left side of the heart, and to the whole arterial system. But how a proportion of carbone in addition to what exists in arterial blood, too small to be discovered by chemical examination, should give such deleterious properties to this fluid, is, in the present state of human knowledge, altogether inexplicable.

The extrication of carbone from the blood is the only excretion we are acquainted with, where a single elementary ingredient is separated by itself; and the only one whose retention is attended with consequences so immediately fatal. A retention of the others eventually produces disease; but in this, the evil is suddenly destructive to life.

is hidden with the other secrets of living actions.

By ascertaining the changes in the elementary principles of the blood, one step is gained in physiological inquiry; but it is a step far distant from a perfect knowledge of the phenomena of respiration, as one of the operations of a living Yet this is the highest point, to which investigations of the subject have been, or perhaps can be, carried. All beyond is conjecture; and conjecture which only serves to shew the vanity of the mind that indulges it.

Hitherto I have said nothing upon the question of the production of animal heat by respiration. This subject involves so many considerations that it requires a separate discussion. Indeed a full examination of it would render a distinct treatise

necessary.

If the view I have taken of respiration be correct; the only mode in which heat can be communicated by that process to the blood, is by a change of capacity for caloric, in conformity to the theory of Dr. Crawford. The experiments of that gentleman are extensive and elaborate, and performed seemingly with every possible attention to accuracy. But in a series of complex processes, where the conclusions depend on a perfect observation of temperature to the tenth part of a degree, it ought not to be considered as disrespectful to him if we do not feel the fullest confidence in his results.

The quantity of matter in the air respired, is so small in comparison to that of the whole body, that it is difficult to conceive it sufficient to preserve the temperature of the body and supply its wastes. Then the air inspired is to be raised from the temperature of the atmosphere to that of the body, and the fluid exhaled from the lungs is to be converted into vapour by portions of the heat thus produced. Were we to suppose the change of capacity of the blood, to be equal to what Dr. Crawford makes it, the demand would be much greater than any supposable change in the air could possibly supply.*

Mr. Brodie's experiments appear to show, that respiration has no effect in producing animal heat. But similar ones performed in this country do not confirm his results. Yet these by no means prove that heat is the direct consequence of the

performance of that function.

It is evident that it is only the reception of heat into the system in a latent state, which can be supposed to be a part of the offices of the lungs. The phenomena of its extrication to subserve the purposes of life do not belong to our present subject. Neither does it belong to us to inquire, whether the heat of the body may be supposed to be derived from the ingesta, or to be produced by the vital powers without regard to chemical means.

Uncommon case of Aneurism, by R. D. Mussey, M.D. Professor of the Theory and Practice of Physic at Dartmouth College.

[Communicated for the New England Journal of Medicine, &c.]

IN the month of June 1814, Jethro Freeman, a black man, called at my study in Salem, Massachusetts, and requested advice for a swelling in his neck, and an almost incessant dry cough. My friend and partner in business, Dr. Daniel Oli-

^{*} See the Author's Inaugural Dissertation p. 26.

ver, being then present, assisted in the examination. We found a pulsating tumour on the right side of the neck, extending along the clavicle from its external extremity about an inch and three quarters, while at the middle or broadest part of the tumour, its lateral diameter was two and an half inches, and its height, from the clavicle upward, was about two inches. This swelling was somewhat painful, and when pressure was applied to it, the pain was increased, and the cough instantly

aggravated. The pulse in his two wrists was alike.

In attempting to account for the origin of the tumour, he stated, that sometime in the preceding April, early one morning, a man broke into his house and fiercely seized him by the throat, under the pretence of searching for stolen goods; that a scuffle ensued, in which he exerted considerable strength upon the intruder, and that, from that time there was soreness, and a small swelling in his neck which had been gradually increasing. That he had since been employed in removing large quantities of corn from the street, to a third story grain loft, and that he carried it upon his right shoulder, in bags containing three and four bushels, and some of them more. His opinion was, that the violent seizure of his neck, caused the swelling. Jethro was about thirty seven years old, rather short of middling stature, with a large head, thick and short neck, very broad chest, and prominent muscles.

On his being informed that the swelling could not probably be removed, except by an operation, and that this was at best, in his case, a doubtful remedy, he insisted on having something for his cough. This symptom, however, we apprehended would be as difficult to remove as the swelling, under the full impression, that it was in some way caused by the tumour. Two or three times after this, in the course of the summer, I saw Jethro in the street, and though the cough had a little abated, the tumour had increased, and his spirits were dejected from hearing sentence of death, so often pronounced upon him

by the different physicians whom he had consulted.

Having removed from Massachusetts in the autumn of 1814, I knew nothing further of this case till January 1816, when being in Salem, I was one day suddenly struck with the appearance of Jethro crossing the street to meet me. He came up laughing, and accosted me by saying, "my neck that you said would kill me, has got well." I looked at his neck and could perceive no tumour, but was in too much haste to go into a full examination. Soon after, I called at the distillery in which he was employed, and received from him the following account.

That in the autumn of 1814, he applied to Dr. Sewall of Inswich, whose prescriptions, the chief of which was blood letting, gave him some relief, but who, like others pronounced his case desperate, and told him, that to lengthen out life to the greatest possible extent, he ought to avoid exertion of every kind. To this advice, he adhered for a while, but at length grew tired of doing nothing, and without the knowledge of his friends or physician, succeeded, by concealing his disorder, in entering his name in a privateer, and left Salem harbour on a cruise in November, 1814. That one evening, about threeweeks after they had sailed, he was thrown into a violent fit of laughter, during which the tumour burst into his throat and caused him to throw up about "a quart of blood and corrupted matter," that he was very faint that night, but was comfortable, though too weak to sit up the next day. That a second discharge of "half a pint" occurred three days from the first, and that in a fortnight he was able to do the duty of a cook; and during the remainder of the cruise, (upwards of three months,) and since that time, his health had been so good, as to allow him to labour almost without interruption, although when he used sudden and strong muscular exertion, he felt a degree of pain in the chest, and difficulty in breathing.

I examined his neck attentively, found its appearance natural, but could not trace the slightest pulsation, either in the right side of the face or neck, or in any part of the right arm. He said there was no loss of strength in the right arm, but there was a greater sensibility to cold in it, and in the right side of the face and neck than formerly, and that, since his recovery, there had been nothing like sensible perspiration upon those parts. This last part of the statement was confirmed by a fellow labourer in the distillery, who assured me that he had often observed a profuse sweat upon the left side of Jethro's

face, while the right side remained perfectly dry.

I considered this a case of spontaneous cure of aneurism, but since that time have had no particular intelligence from it, until very recently. To the politeness and friendship of Dr. Sewall of Ipswich, I am idebted for a communication which enables me to give its subsequent history. This communication evinces the same zeal and exertion for the promotion of the interests of the profession, which its author has displayed on former occasions, and which is worthy the imitation of all who have it in their power to register extraordinary cases, or trace, by the knife, the effects of disease. I give the Doctor's own account.

"From the time of his return from sea, in the spring of 1815, Jethro continued to labour at his accustomed employments till early in the spring of 1817, when he suffered from an attack of inflammation of the lungs, and was admitted into the almshouse of this town, [Ipswich] under the care of Dr. Choate, whose politeness in the facilities and aid he has afforded in this case, lays me under great obligations. Dr. Choate informs me, that from the time Freeman came under his care till his decease, he was affected with an almost incessant cough, copious expectoration, hoarseness and difficult respiration, with wheezing as though his breath passed through a narrow aperture. He manifested great impatience of an erect posture, and always studied that position of the body which gave the greatest capacity to the chest. He continued in this situation till sometime in April 1817, when he was taken with profuse hæmorrhage from the mouth, and died in about five minutes."

Dissection.

"In company with Drs. Choate and Story, I made an examination twenty hours after death, and found the following morbid appearances. On opening the thorax, the lungs were found adhering to the pleura costalis in nearly their whole extent of surface, were dense and considerably distended with blood contained in the vessels and air cells. The heart and aorta were almost entirely empty. The arteria innominata was formed into an aneurismal sac three inches in diameter, in the form of a globe considerably flattened. The mouth of this artery was about twice the natural diameter. At the place of its bifurcation into the right carotid and Subclavian, it was impervious and appeared to have been the seat of former inflammation, having with its cellular substance been formed into an indurated tumour of the size of a pullet's egg. The aneurismal sac was partially distended with blood, adhered firmly to the anterior and right side of the trachea, while it so compressed and flattened it, as to lessen its caliber more than one half. We found two apertures passing between the annular cartilages into the sac: these appeared to have been recently formed, and were probably occasioned by a rupture of the sac, and bursting of its contents into the trachea. The largest of these was three fourths of an inch in length. carotid and subclavian arteries in emerging from the aneurismal tumour, had degenerated into firm cords for about an inch; after which they were pervious in their various distributions, but considerably contracted in size, with their coats proportionably thickened. Many of the lymphatic glands in the neighbourhood of the aneurism, were enlarged to the size of grapes, and of a livid colour. The abdominal viscera exhibited a natural appearance except the stomach, which contained about a quart of fluid black blood. The coats of this organ manifested no marks of disease."

Remarks.

"It appears probable, that at the time the subject of the above case was exposed to great muscular exertion, the arteria innominata and a portion of the right carotid and subclavian arteries became enlarged into an aneurismal sac. This sac was so compressed in its middle, by the right clavicle, as to assume in the course of its enlargement, the form of an hour glass, one half rising above the clavicle, the other remaining below out of sight. In the winter of 1814, while the patient was at sea, that part of the sac above the clavicle having formed an adhesion to the contiguous parts was ruptured, and discharged its contents into the trachea, which gave the idea of a spontaneous cure. Previous to this event,* an adhesion between the sides of that part of the sac compressed by the clavicle must have taken place to cut off the communication between the upper and lower sac, so as to prevent fatal hæmorrhage. This adhesion could not have taken place long before the rupture of the sac, for an examination but a few weeks before it was ruptured, the tumour exhibited a strong and distinct pulsation, and continued to increase in size. That part of the sac remaining below the clavicle probably continued to enlarge till it burst at the time of the patient's decease. From the size and situation of this tumour, and its pressure on the lungs and trachea, we can easily account for the cough, hoarseness wheezing, difficult respiration, and impatience of an erect posture which so constantly attended the patient during the latter periods of the disease.

As the circulation in the right arm, and right side of the head and neck, through the medium of the arteria innominata must have been entirely cut off, at least since the rupture of the upper sac, in December 1814, it would be gratifying to know by what vessels these parts were supplied with arterial blood. There could never be perceived either debility emaciation, or derangement of function in these parts except coldness and want of perspiration. Was not the circulation carried on chiefly through the circle of Willis, or rather that part of the circle formed by the basilar artery by which the two

^{*} Dr. Sewall informs me that before Jethro went to sea, in 1814, the pulsation had ceased in his right arm, and the right side of his neck and face.

vertebral arteries freely communicate with each other? I have regretted that it could not have been determined by an injection of the whole subject, by what vessels the parts deprived of pulsation were supplied with blood, since it would probably have furnished an interesting specimen of the resources of the animal economy in such cases. May not this case be considered as supporting the doctrine of Bichat, that the heart is unaided by the contraction of the arteries, in the circulation of the blood?**

"The blood found in the stomach, was probably swallowed during the continuance of the hæmorrhage. Perhaps some part of it passed the œsophagus after the patient became in-

sensible."

In addition to the above remarks of Dr. Sewall, I will offer only a suggestion by way of query, whether the aneurismal sac, the rupture of which destroyed the patient, might not have been formed after the spontaneous cure of the upper sac; or if it existed before, whether it must not probably have been very small compared with the other, at the time of its rupture in December 1814.

R. D. MUSSEY.

January 3, 1818.

Letter on Ergot.

To WILLIAM HAMERSLEY, M.D. one of the Physicians of the New York Hospital, &c.

[For the New-England Journal of Medicine, &c.]

WHILE the virtues of ergot are extolled in almost every European and American Journal of Medicine, and while you are about commencing the use of it in the New York Hospital, permit the underwriter, in compliance with your request, to lay before you a few remarks, on the cases in which he has used the ergot.

The underwriter was very much prepossessed in favour of the ergot, from having, when a boy, heard, from the farmers, that it would make the mare slink her foal; and the cow, her

^{*} See an interesting memoir on the agents in the circulation of the blood. New England Journal, Vol. II. p. 9.

Vol. VII.

calf; and also having seen the farmer, when winnowing his rye, drive his mares and cows from this refuse part of his grain.

Under this impression, the underwriter was, in the spring of 1803, furnished with portions of the ergot, put up in papers; and with particular directions for its use, by a medical friend,* to whom it had been transmitted and highly recommended by John Stearns, M.D. of Albany, who introduced

this article into public use.

The directions were, never to give the ergot till true labour pains had commenced, and dilated the os tincæ to the size of a dollar, and even then not to be given in larger doses than twenty grains; because, given prematurely, or in too large doses, the violent uterine contractions which it would produce, would be in danger of rupturing the walls of the uterus; or of destroying the child.

The writer of this article, and his medical friend, repaired to a granary, and collected about half-a pound of the ergot, of undoubted quality; which was divided between them, and with which they expected to obtain great fame as accoucheurs.

The first case that occurred, in which the underwriter dared to use his friend's powerful remedy, was gladly embraced. Naturally abhoring every thing which looks like a mystery, or secret in medicine; the underwriter desired one of the persons in attendance to steep the powder in water, and let the patient drink it; not even waiting for the dilatation of the os tincæ; so eager was the underwriter to test the efficacy of this new medicine; and, not telling the patient, with watch in hand, and mystic look, that this medicine would cause her child to be delivered in ten minutes, whether she would or not.

The underwriter waited with some anxiety and much impatience for the powerful uterine efforts; but they were not produced; at the end of one hour, no change had taken place. The dose was repeated; it was doubled; it was tripled, till seven full doses were expended, without the least apparent effect. Some hours after the last draught, the patient was delivered in the same good time, as she probably would have

been, if she had taken no ergot.

The underwriter reported the case the next morning to his friend, whose reply was, sir, you will kill somebody with your double doses.

A dozen other cases occured in which the ergot was given to the amount of half an ounce, or an ounce, without any decided effect, unless it might have puked two or three; and

^{*} Dr. Josiah Dwight, of Portsmouth, New Hampshire.

then the spasmodic action, excited by the vomiting, was generally transferred to the uterus; as it probably would have

been, if any emetic drug had been given.

The last case of parturition, in which the underwriter used the ergot, was, the fourth of October 1808, for a patient living a few miles out of town; with whom he was extremely unwilling to stay all night. To prevent which he took his whole stock in trade amounting to at least a quarter of a pound of ergot.* Immediately on his arrival he began the use of the medicine; and by midnight he was a perfect bankrupt; the patient having drank the tea made from the whole of it; and towards the last, she also drank the sediment itself; and all without the least effect; for the underwriter was constrained to stay till after breakfast.

In September, 1812, the underwriter was consulted on account of a female, on whom a wicked but unsuccessful attempt had been made to procure abortion, by rupturing the membranes mechanically. She took, during this state, very large

quantities of the ergot, without any effect.

The underwriter forbears reflections, when so many respectable names attest the powers of this article. He must, however, be allowed to call to mind the wonderful parturient effects once ascribed to crude mercury,† and to certain stones found in eagles' nests.‡ He would humbly propose to the advocates of this new remedy, that they should test it more critically; vary their mode of administering it, and not wait for the dilatation of the os tincæ. Suppose they should put up a dozen doses of ergot, and an equal number of papers containing the same quantity of ground coffee. When a case occurs for the use of the ergot, and the exact moment has arrived, the accoucheur shall deliver to the nurse, without any observations, one paper of ergot and another of coffee, with directions, that

^{*} It is proper to state that supplies of ergot had been received from Nathan Smith, M.D. Professor of Medicine in Dartmouth College; from Col. Dyer Spalding; and from several granaries.

[†] Fernelius has seen pounds of it given to produce abortion.

[†] Doctor Dewees, of Philadelphia, used to tell his class, in his lectures on midwifery, that there still existed, in this country, the remnant of an old German custom; which was, as soon as a lady is taken in labour, to unlock every door, closet, drawer, etc. in the house; thereby manifesting the willingness of the family to remove every obstacle to the introduction of the young stranger; hoping that nature would follow their example, and remove all obstructions to the birth of a child. No key was suffered to be turned till the end of the ninth day; when the nurse, by locking the doors, kindly admonished dame nature, that it was time for her to suspend the discharges.

she prepare and give one of the powders, and put the other in her pocket. The accoucheur shall not inspect the preparation nor administration of the draught, but shall remain igno-

rant of which was given.

When he returns home let him enter his remarks in his common place book. On his next visit he shall demand the unused powder of the nurse, and fill up the blank with ergot or coffee, as the case may be. When his twenty four powders are all used, let him read his remarks on his twenty four cases; and if he have not recorded as wonderful effects from the use of twenty grains of coffee, when the os tincæ was dilated to the size of a dollar, as from the use of a like quantity of ergot; certainly the article was not genuine, or, it has failed to produce its usual effects, when administered by, sir, your most obedient and humble servant,

L. SPALDING.

New York, October 1, 1816.

Read before the New York County Medical Society, January 5, 1818.

Hydrocephalus treated by an operation. Case communicated in a Letter to Dr. Warren. By James Vose, M. D.

To ASTLEY COOPER, Esq.

My Dear Sir,

YOU will oblige me by communicating the following memorandum to the Medico-Chirurgical Society when an opportunity offers. The case it relates to has occupied much of my attention—it has been seen by several of the more intelligent medical men here with great interest, and will, I am per-

suaded, excite a corresponding feeling in the society.

On the 11th of July last, I was requested by Dr. Formby, my friend and colleague at the Liverpool General Dispensary, to see a case of advanced hydrocephalus with him. The patient was an infant of seven weeks old, whose head was enlarged by the accumulated fluid, to between two and three times its natural size. But little ossification seemed to have taken place since the birth of the child; shortly after which, the mother noticed the preternatural and increasing size of the head. The enlargement had been progressive from that time, and the head had become so transparent, that when held between the eye and the light it was not unaptly compared to a paper lantern.

The child, at the time I visited it with Dr. Formby, being free from any additional symptoms indicating a serious affection of the general health, with the exception of slight derangement of the bowels, and occasional convulsions; we thought this a favourable case for the experiment of gradually discharging the water from the head by puncture. The operation was accordingly performed the next day, by means of a couching needle, of the size and shape formerly in use; three ounces and five drachms of a liquid fluid were discharged, and the opening was closed with adhesive plaster, a roller being at the same time, applied round the head. After the discharge of this small quantity of fluid, the head lost its tension and globular form, and became so flaccid as to allow the fluid to gravitate backwards while the child laid upon its mother's knee, giving to the loose integuments the form of a pendulous bag. About an equal quantity of fluid dribbled from the orifice after the operation, and the child sunk so extremely low as to create the greatest alarm in the mind of the mother, and induce her to apply to the dispensary for assistance at midnight. The child however, revived without the aid of medicine, and the fluid again accumulating, the head became as tense as before, in a very few days. On the 29th of July the operation was repeated. I was less cautious in the mode of the puncture and the quantity of water abstracted on this occasion; the operation was performed with the curved and pointed bistouri of my pocket case, and five ounces of fluid were evacuated. No unpleasant consequences followed, and the head having regained its former size, it was a third time punctured on the 20th of August. Eight ounces were now discharged and no constitutional disturbance succeeded to the operation.

The head was punctured for the last time on the 29th of Aug. and a small grooved director being introduced into the orifice, twelve ounces of the fluid were drawn in a continued stream. The head on this occasion became so flaccid and shapeless that the mother was shocked with its appearance, and fearful

of the consequences of raising it from her knee.

No derangement of the infant's health followed this fourth

operation.

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It was observed that between the first and second operation the relaxed state of the integuments had allowed the process of ossification to advance in a perceptible degree. This was still more remarkable, after each of the succeeding operations; and before the last, the sagittal suture, which had at the commencement of the treatment divided the frontal bone as low as the nose by a wide chasm, was no longer distinguishable to the touch.

A short time after the last operation, the child was perceived to discharge a considerable quantity of fluid by the bowels; this at first took place with the natural motions, but afterwards the fluid, resembling in its sensible qualities, that discharged from the head, was evacuated alone, and continued to be so, for four or five days.

The same low state as followed the first puncture of the head, occurred on the second day of this discharge from the bowels; and it was particularly remarked, that a diminution of the size of the head, had corresponded with the quantity of water thus

evacuated.

Ossification now advanced with greater rapidity, and the bones of the head are now nearly as complete as is usual in a healthy child of a similar age. Our little patient has besides improved in health, size and vigour, its appetite is good, and what has afforded us particular interest, not a single convulsion

has occurred since the first operation.

My friend Dr. Traille, a gentleman who unites to very various scientific acquirements much skill in practical chemistry, examined the water discharged from the head at each operation, and found it to contain scarcely a trace of albuminous matter. He considered it to possess more of the characters of simply diluted mucus. After the second and third operations the presence of albumen was more sensible.

The medical treatment of the child was restricted to the preservation of the healthy action of the bowels, by small doses

of Hydrargyrus cum creta.

Liverpool, March, 1818.

Seton in Fracture.

[To the Editors of the New England Journal, &c.]

Gentlemen,

If you think the following case worthy of record, you may give it a place in your Journal. It is another evidence of the utility of a seton, in the event of a fractured bone not uniting in a reasonable time. I think also some advantage may be derived from an apparent errour in the treatment of the case.

This errour was either not passing the cord through the centre of the bone, or else allowing it to remain too long. From the case reported by Dr. Physick, where the cord remained in the arm till a perfect union had taken place, I expected the same in this case; but I am now convinced that the perfect union of the bone was retarded four or five weeks by the presence of the cord. Perhaps, if the cord had passed between the centre

of the ends of the bone, the ossifying process might have been perfect on each side of it. In this case the point of the needle struck a projecting part of the bone, and was turned out sooner than was intended, and consequently passed principally on one side. This probably kept the ends of the bone on this side separate, and thus prevented their firm union.

You will perceive by the dates, that the alterations in this case were very gradual, and such as to cause some doubts with regard to the propriety and success of the treatment. The patient however has at this time recovered the perfect use of

his arm.

ROBERT THAXTER.

Dorchester, Jan. 1818.

A. F. aged twenty-five, healthy, and of a sanguineous temperament, while heaving at the windlass in a gale in Provincetown harbour, was hove overboard by a handspike, April 12th, 1816. After making much exertion in the water he caught a rope, and was taken on board with his left humerus broken near its middle. About twelve hours after the accident he went on shore, and his arm was dressed. He tarried at P. ten days, then went by water to Boston. The arm inflamed very little, and gave very little pain: consequently he did not confine himself, but used much exercise, and of that kind which gave much motion to the fractured arm.

About the middle of June the arm was more firmly secured by splints, rest strongly recommended, and friction with stimu-

lating applications was freely used.

Towards the last of July, the arm remaining flexible, an attempt was made to excite inflammation by giving it considerable motion, and rubbing the ends of the bones against each other. After this the skin was kept irritated around the fracture, by Tinct. Mel. vesic. and the application of small vesicatory plasters about fifteen or twenty days. This method produced some more inflammation and pain; but on the whole no material ad-

vantage.

October 21. An incision about an inch long was made between the flexor and extensor muscles of the arm, down to the bone, then a large crooked needle armed with a number of silk threads was passed between the ends of the bone, and brought out at the back of the arm. The ligature probably embraced about one quarter of the circumference of the bone. This produced considerable inflammation and pain. The pain continued several weeks. The swelling subsided as soon as suppuration took place. Three or four weeks after, the seton was passed, inflammation took place again, which terminated in sup-

puration. The cavity, formed thereby, extended about three inches above the fracture, and at first discharged at the seton; but afterwards formed an opening at its top.

No perceptible change in the flexibility of the arm was discovered for twelve or fourteen weeks. At this time a very

slight union appeared to have taken place.

February 1, 1817. The bone had acquired so much firmness, that the arm could be lifted by the hand without bending, and

could nearly support its own weight.

March 5. The arm had not gained the last month, but appeared rather weaker. The silk was withdrawn, and a few threads of cotton substituted. This produced a slight increase of pain and swelling. March 15. The cotton was removed, the arm remaining much as it was six weeks before. The arm above the elbow was emaciated, and below ædematous. Frictions, and stimulants were assiduously used, and the arm left without bandage a part of every day. The discharge immediately ceased, and the openings were healed in about a week. From this time the arm acquired strength daily, and by the middle of May could support its own weight, and be moved without hurt or flexure.

During the winter the discharge from the seton was copious. The appetite was indifferent, attended with acidity. Lime water and cinchona at this time were administered, three drachms of the latter daily.

Remarks on Bloodletting.

[Communicated by a Correspondent.]

HERE is not, perhaps, any remedy so important as bleeding, respecting which there is so much diversity of opinion and practice among physicians.

This contrariety of sentiment and practice is the more to

be regretted because bleeding is often highly useful, and not unfrequently indispensable, in the successful treatment of ma-

ny diseases.

It is singular that any practitioner should discard bleeding from the means he is led to adopt, for the cure of his patients. There are few, however, I believe very few physicians of this description. There is a much greater number who begin to bleed too late, who bleed too seldom, and too sparingly. It would be a hopeless task to attempt to influence those who reject this practice altogether; I address myself therefore to those only who are willing to examine the subject by the light

of written testimony, observation, and experiment,—and to set it down for what it is worth. No student whose purpose is to become a useful and reputable practitioner in medicine or surgery, will reject bleeding before he understands its real character and effects, as a remedy. And I will hazard the prediction, if his investigations are conducted with candour and judgment, that he will in due time come to consider bleeding among the most efficient weapons with which he is to combat and subdue the numerous diseases he will be called to encounter.

I do not mean that he is to bleed in every case, but that there are few remedies which he will have occasion to adopt more frequently, and not one that he will use with more satis-

faction or advantage.

Compared with other remedies, there are two circumstances in favour of bleeding which do not apply to other curative means singly considered. When bleeding is indicated its good effects may be realized at once without loss of time; and the other means of relief, which before this evacuation might be of small service, will often be decisively remedial after it. Whenever, therefore, bleeding is required, it should usually precede other evacuations.

Emetics, cathartics, sudorifics, and blisters are all more conveniently administered, and their good effects are more cer-

tainly secured after bleeding than before it.

But this comparative and associated view, is not the only one which is to be taken of bloodletting; for it is sometimes the principal, or the sole remedy required to cure a disease, or to save life. It must be recollected, however, that in severe disease, it will not be found, when used alone, to merit or support this high reputation, unless it be freely and perseveringly practised.

It is by no means intended in these brief remarks, to point out the several cases and disorders in which bleeding is proper; or to lay down the rules by which the practice is to be regu-

lated.

To offer some suggestions, in the hope of inducing medical students and young practitioners, impartially to examine an essential means of curing disease, and to avail themselves of its advantages, is all my aim. With this view, I will recommend to their perusal three books only. There are many other writers who present us with plenary evidence in favour of bleeding; but I am satisfied with these, for they cannot be read by any fair inquirer without leading him to try bleeding, or to look further before he rejects it.

Vol. VII.

1. Rush's Defence of Bloodletting, in the 4th vol. of his Medical Inquiries and Observations;

2. James Johnson, on the Influence of tropical Climates.

London, 1 vol. 8vo, 1815; and

3. Tho. Mills' Essay on Bloodletting. Dublin, 1813.

In his preface Dr. Mills says, "Within the last thirteen years I have severally made trial of opium, bark, mercury, wine, cathartics, and the cold and warm affusion for the cure of fever. Of the good or ill effects of these remedies it is not my design to treat; I shall barely remark, that whatever opened the bowels and diminished vascular action afforded most relief. I was induced to make the trials now mentioned from the fatality of the disease, from the fluctuating and opposite theories respecting its nature, and from the want of any rule or principle to regulate the treatment. I had finally adopted the purgative and sedative as the most beneficial plan, when the valuable work of Dr. Clutterbuck fell into my hands. His reasoning appeared to me so conclusive, and his remarks so just on the use of bloodletting in fever, that I resolved on the first favourable opportunity, to make the experiment. This opportunity soon occurred in the house of recovery and fever-hospital, during the prevalence of an epidemic in the summer and autumn of 1810. The experiment was begun under feelings of great anxiety, for bloodletting had long been disused and condemned in these kingdoms, and I had never witnessed its The doctor met with good success in his first trials of bleeding, and was encouraged to use it more freely and extensively in his public and private practice.

He experienced, however, as might have been anticipated, the uncertainties and inconveniences of applying a remedy, whose effects he had not previously witnessed. Under these embarrassments, heightened probably by the want of support from his professional brethren, perhaps by their opposition to what in Ireland, it seems, had become from neglect, a novel practice. Dr. Mills deserves our thanks for his perseverance, and for the care and caution with which he pursued an untried course. This gentleman not only bled in typhoid fever, but at a later period of the disease than any physician I have known. Bleeding was performed as late as the 20th and 22d day of typhus and other fevers; the operation was repeated too and with advantage! This was indeed something new. How many must have perished for want of bleeding. It is not to be expected that any physician can derive from bleeding, or any other remedy, all the happy results it is capable of producing, till he has obtained an accurate knowledge of its nature, mode of administration, and effects, in different cases and

circumstances.

Dr. Mills, for instance, has done much towards bringing venesection into the notice it fully merits,-but whenever he shall have acquired all the information that is attainable on this subject, he will be able with his lancet, to accomplish more for his patient in one day, than he has yet done in three. I do not blame the doctor for this, on the contrary, I consider his guarded and watchful steps, as the best proof he could have given, of his being qualified to, lead in an untrodden path. Instead of three or four moderate bleedings in fever, on as many successive days, as sometimes occurred before the discase gave way,—the same quantity of blood drawn in twentyfour or thirty-six hours, would almost certainly have afforded as great, or greater relief, as well as more speedy amendment. The effects of bleeding must depend on the mode and frequency of the operation, and on the quantity of blood taken from the system in a given time. Thirty ounces of blood taken in twenty-four hours, would have greater effect in lessening an inordinate action of the sanguiferous system, and other febrile symptoms, than the same quantity taken in two or three days. And these good effects would be far more considerable if the blood were drawn in a full stream from a large orifice, so as to produce fainting, than they would be under the opposite circumstances. Where bleeding is the appropriate remedy, and no sensible benefit follows the operation in four hours, it should be repeated at the end of this period. This rule should vary with the varying urgency of the case, and the necessity for bleeding as the chief or only means of cure or mitigation to be relied on. That the loss of a little blood is not so killing a thing as some ignorant, timid, or selfish doctors would have their patients believe, when the popular voice is with them, is now perfectly well understood by the more knowing and honest part of the profession. Speaking of the bilious yellow fever, which prevailed in Philadelphia in 1797, Dr. Rush informs us, that "The quantity of blood drawn in this fever was always in proportion to its violence. I cured many by a single bleeding. A few required the loss of a hundred ounces of blood to cure them." The doctor enumerates several persons who were thus freely bled, and adds, "But I was not singular in the liberal and frequent use of the lancet. The following physicians drew the quantities of blood annexed to their respective names, viz.-

Dr. Dewees, 176 ounces from
Dr. Griffitts, 110 ,, ,, Mr. S. Thomson,
Dr. Stewart, 106 ,, ,, Mrs. M'Phail,
Dr. Cooper, 150 ,, ,, Mr. D. Evans,
Dr. Gellespie, 103 ,, ,, Himself.

All the above named persons had a rapid and easy recove-

ry, and now enjoy good health.

I lost but one patient who had been the subject of early and copious bleeding. His death was evidently induced by a supper of beef steaks and porter, after he had exhibited the most promising signs of convalescence." Could these persons have been saved from death by small bleedings, or by no bleeding at all? Before closing these remarks, which have already exceeded their intended limits, it may be well to observe one fact which shows the great utility of bleeding. Blood has lately been drawn, with the best effects, in the treatment of a number of diseases in which it was for a long period pronounced to be improper; as in hooping cough, dropsy, difficult par-

turition, peritonitis, &c. &c.

All this undoubtedly is very much in favour of bleeding, and it is also very just and very true. But it is very well to remember as we go along, that it is possible to carry a good thing too far. How else are we to account for the fact, that bleeding has fallen into disrepute, and been neglected in different countries, and at various times, after having been for a season in good use and fashion? Like all other efficient and decisive remedies, bleeding is liable to be used at the wrong time, or in excess, and consequently to do mischief. But this abuse of a remedy will never be suffered to detract from its real value, in the estimate of discerning and independent minds. On the 3d day of August last, I visited a labouring man in the evening, who was threatened with fever. He had been complaining three days; his pulse was quickened and pretty full; his tongue was furred, stomach sick, with pain in the back, &c. I proposed bleeding and an emetic. He had many doubts and fears about losing blood, and begged to have the operation deferred till the next morning, to which I reluctantly assented. I saw him early the next morning, determined to bleed if I should not find him better. Somewhat to my surprise, however, he was completely relieved; the emetic had operated well, and every symptom of disease had disappeared. If I had taken blood I could not readily have been made to believe that all this improvement had originated from the emetic alone,—but now there was no room for doubt. This febrile state was sympathetic, arising from irritation of the stomach.

From this case I drew the following conclusion. In any case of illness, where the utility of bleeding is doubtful, and where an emetic, or cathartic, or both, are clearly indicated, the best mode of proceeding is to evacuate the stomach, and if need be, the bowels also first, and then after the effect of this measure is seen, to bleed or not, according to circumstances.

REVIEW.

Memoirs of the Life and Doctrines of the late John Hunter, Esq. founder of the Hunterian Museum at the Royal College of Surgeons in London. By Joseph Adams, M. D. Author of Observations on Morbid Poisons, &c. London, printed for J. Callow, J. Hunter, and J. Ridgway, 1817.

NHE name of Mr. Hunter is not to pass away with the century which gave him birth. On the contrary, he will be remembered as long as the English language is spoken, as one of the brightest ornaments of which the medical profession can boast. No doubt it may be said of him, as of most other great men, that he owed much to his immediate predecessors. Had he lived in the preceding age he could not have done so much. Let this be granted; it does not detract from his greatness. For were there not hundreds of others who were his contemporaries, who might equally have availed themselves of the lights then in the world, but who did not do it. It is in this way we are to measure the greatness of extraordinary men. This argument is strengthened in the present case by this circumstance, that in many respects Mr. Hunter's education was much inferior to that of his competitors, and therefore his opportunity for deriving benefit from the labours of others, was so far lessened. This is true at least of his early education, although afterwards he enjoyed peculiar advantages. To confirm these remarks, and to perform a service, which will not we think be either useless or ungrateful to our readers, we shall give a very cursory view of the life and doctrines of this great physiologist.

Mr. John Hunter was born of respectable parents in Scotland, and was the youngest of ten children. His brother, the famous Dr. William Hunter was the only son of this family, except himself, who lived to mature age. One of his sisters gave birth to Dr. Matthew Baillie, whose work on morbid anatomy has procured for him such high reputation, and who

most deservedly holds the first rank among the physicians in

Great Britain at the present day.

Mr. Hunter had a school education, but the period of his youth was nearly wasted in idleness. That he so well redeemed his time afterwards, may serve as an encouragement to others in a similar situation. In the year 1748, when about twenty years of age, he was determined in respect to his course of life, by hearing of the great reputation of his brother as a teacher of anatomy. He then went to London, where he was received and educated by Dr. Hunter. He was introduced at once into the dissecting room, and from this period, for the remainder of his life, was the most industrious of men. His very first essay enabled his master to prognosticate his future excellence as an anatomist. The dissecting room was his principal place of residence for ten years. It was during this time, however, he attended under Cheselden at Chelsea hospital, and at St. Bartholomew's and St. George's hospitals; and during the same period he took the other steps necessary for his education as a surgeon. Before the expiration of this period also he had been chosen house-surgeon at St. George's hospital, and became a partner of his brother in conducting the anatomical lectures.

It was not dry anatomy which Mr. Hunter pursued, nor was he engaged on the human subject alone. By studying comparative anatomy he was enabled to understand the functions of the animal organs, and the analysis of the functions led to the

detection of the vital powers.

Induced, partly by a threatening of phthisis pulmonalis, and partly by other considerations, in 1762, Mr. Hunter sought and obtained an appointment in the army as staff surgeon, and embarked for Belleisle. He continued in the army about two years, and during this time he not only increased his surgical knowledge, but availed himself of opportunities to extend his acquaintance with comparative anatomy and physiology. In 1763 he returned to London, and now in his thirty-sixth year he commenced his career as a private practitioner. Although he was already known and respected in the scientific world, and so much so, that he was about this time elected a Fellow of the Royal Society, he was as yet quite unknown to the public as a surgeon in that way which would obtain him private practice. Nor had he probably all the assistance which might have been derived from his brother's influence in promoting his advancement in practice, as previous to his entering the army a degree of coolness had unhappily originated between them, which was not entirely overcome during Dr. Hunter's life-time. But Mr.

Hunter's habits of industry were perfectly established, and his zeal in the pursuit of knowledge was most ardent. Supported by his half-pay as a surgeon in the army, while he waited for employment in private practice, he was busily engaged in prosecuting comparative anatomy. It was during this time he made many of those invaluable preparations which enrich his museum. He had already laid a solid foundation for fame, and from this time until his death, his reputation as an acute and profound philosopher, most especially as to every thing which relates to animated nature, was constantly rising and extending. In the Royal Society, he was a most distinguished fellow; and he was one of a small party who used to retire after the formal sessions of that learned body, in order to discuss familiarly the various subjects connected with the advancement of science.

About 1768, Mr. Hunter was elected Surgeon of St. George's hospital, and from this period his professional business seems to have been increasing. Yet during much of this time his pecuniary reward was very small, so that the great expenses incurred in pursuing his favourite study, comparative anatomy, absorbed all the savings of his laborious life. What his expenses were, however, may be in some measure estimated, when it is known that he purchased a small house in the country, near London, at which he spent as much time as possible, in order to prosecute some inquiries which could not be conducted in the city; and that he likewise erected a considerable building near his place of residence in London for the reception of his anatomical museum. It was not until the year 1771, at the age of forty-three, that his finances permitted him to be married.

The talents of Mr. Hunter were not overlooked by the government of his country. In 1776, he was appointed surgeon extraordinary to his majesty, George III. In 1786, he was made deputy surgeon general to the army, Mr. Adair being surgeon general. That gentleman dying in 1789, Mr. Hunter succeeded him in that office, and was at the same time made

inspector general of hospitals in the army.

It has been mentioned that before entering the army, Mr. Hunter was associated with his brother in giving lectures on anatomy; after his return to London in 1763, he became a private teacher of anatomy. In 1773 he first gave public lectures by himself, and these were on the principles and practice of surgery. He seems to have undertaken this task with great reluctance. His brother was not only a learned, but an elegant and a fascinating lecturer. He was prepared for this

office by great classical acquirements, and by great polish of manners. Mr. John Hunter had not these qualifications, and although he excited the strongest interest in young men of intelligence, when prepared by having gone through the elementary studies of their profession, he could scarcely keep a common audience awake. He was aware of his own deficiencies, or at least was not insensible to the effects of them; for although he acquired great reputation from the publication of his discoveries and doctrines in whatever mode, yet he did not attract large classes of pupils. He was induced to lecture from finding, that his opinions were often quoted incorrectly, and his discoveries often attributed to others. The only remedy was to make them both known to the public in a systematic form.

The most prosperous part of the life of this great man, was rendered uncomfortable and often distressing by disease. In 1776 he was first affected with angina pectoris. At subsequent periods he had distressing affections of the brain, induced perhaps by irregularities in the great organ of circulation. Dr. Adams believes that an inflammation of the great arteries of the brain was produced at these periods. His death took place suddenly in 1793, in consequence of a mental irritation. By this the functions of the heart were so embarrassed that that organ instantly ceased to act. This would not have happened if the heart and large blood vessels had not previously undergone great changes of structure and consequent injury of powers. His case and dissection are extremely interesting in a medical point of view, but we have not room to detail them.

Having made this brief sketch of the life of Mr. Hunter, we proceed to give some account of his scientific labours and of his doctrines. This great man differed from many other celebrated teachers, in not having a system to support. He studied the structure of organized beings with great accuracy and diligence; he compared with the utmost care in various animals the organs destined to the same purposes; and watched without ceasing, the various operations performed both in human and brute subjects, and in plants also, during health and during disease. The various facts thus brought to light were compared with those discovered by others, old opinions were not hastily condemned nor blindly venerated, but the history being ascertained, the philosophy was deduced according to the best principles laid down by Lord Bacon. Thus it happened that so far as Mr. Hunter formed a system, it was by furnishing separately all the constituent parts, which then came together by their own natural accordance.

The first important observation, which brought the name of John Hunter before the scientific world, was in respect to the descent of the testis about the seventh month of the fœtal life. Here he shew that an important mechanical effect, a very considerable change of place in an organ, takes place regularly at a certain period, not from any obvious and accidental mechanical necessity, but from the operation of the same laws which determine the original growth of parts and which occasion the development of various organs, at their appointed periods. In this observation he only stated facts which he had noticed,with consummate skill and care indeed, - and infered the operations which must necessarily have been performed; yet some persons were then and are even now perhaps disposed to remark that he advanced a very singular doctrine and one which it is hard to comprehend and to believe.

The discovery alluded to in the above paragraph was published in Dr. Hunter's Medical Commentaries. Of the other works of Mr. Hunter, published during his life time the follow-

ing list is given by Dr. Adams;-

On Digestion of the Stomach after Death. « 1772.

Observations on the Torpedo. 1773.

Of certain Receptacles of Air in Birds. 1774.

On the Gillaroo Trout. 1774. 1775. On the Gymnotus.

1775. Experiments on Animals and Vegetables, with respect to their Power of producing Heat.

Proposals for the Recovery of people apparently 1776.

drowned.

Of the Heat of Animals and Vegetables. 1777.

The above are all contained in the different volumes of the

Philosophical Transactions.

In 1778, he published his second part of the Natural History of the Teeth. The first had been published some years They are, however, included under one title, and before. dated 1778.

Account of the Free Martin. 1779.

Account of a Woman who had the Small-Pox during 1780. Pregnancy.

Account of an extraordinary Pheasant. 1780.

1782. Account of the Organ of Hearing in Fishes. 1785. Anatomical Remarks on a new Marine Animal.

An Experiment to determine the Effect of extirpat-

1787. Observations tending to shew that the Wolf, Jackall, and Dog, are of the same Species.

1787. Observations on the Structure and Economy of

Whales.

1789. Supplementary Letter on the Identity of the Species of the Dog, Wolf, and Jackall.

1792. Observations on Bees.

Six Krohnian Lectures on Muscular Motion, from 1776 to 1782.

These make the remainder of his papers in the Transactions.

The following are only to be found in his "Observations on certain Parts of the Animal Economy."

Observations on the Glands situated between the Rectum and Bladder, called Vesiculæ Seminales.

Of the Structure of the Placenta. Some Observations on Digestion.

On a Secretion in the Crop of breeding Pigeons for the Nourishment of their Young.

On the Colour of the Pigmentum of the Eye in different

Animals.

The Use of the Oblique Muscles.

A Description of the Nerves which supply the Organ of

Smelling.

In 1786, he published his grand practical work, the Treatise on the Venereal Disease; and in 1793, "Observations on the Inflammation of the internal Coats of Veins," in a volume of Transactions of a Society for the Encouragement of Medical and Chirurgical Knowledge."

In the list given above of Mr. Hunter's works, his Treatise on the blood, Inflammation and gun-shot wounds, is not mentioned. This was not published by himself. It was committed to the press and some of the sheets were struck off before his death; but it was published afterwards by his brotherin-law and pupil, now Sir Everard Home. In this work we have the substance of the author's lectures on the principles of surgery. He had contemplated this publication for twenty years, but delayed it from a desire to render the work as perfect as possible.

The subject of this work is one worthy the attention of such an author. Inflammation is, in itself and directly, the most important disease which affects the human species, unless fever must be excepted. In the brain, in the lungs, in the heart, and in a less degree in the abdominal viscera, it brings life into

immediate danger. The same is true even when this disease has its seat in less noble parts, even in the cellular membrane under the skin. Also, indirectly, inflammation causes diseases of great variety, and often of great importance, when very moderate and very limited in its own extent. This it does by inducing changes of structure, by which our organs become incapable of performing their ordinary functions.

For the surgeon, who has to do with mutilations of the body, produced by accident in wounds and fractures, or by design in operations, a thorough and intimate acquaintance with the phenomena and occurrences of inflammation is absolutely requisite. Next to his knowledge of anatomy, this may be said to lay at

the foundation of all the principles of his art.

Mr. Hunter seemed to discover at a very early period of his life how imperfectly this subject was understood. We learn that as early as the year 1762, he had already been for twelve years collecting materials relating to it, and then arranged them. It was a favourite object of his afterwards to increase this stock of materials, and to purify and correct them.

In this work on inflammation, the author first lays down certain laws which govern the system when under disease; such as, that different diseased actions are incompatible with each other; that particular textures are susceptible of the influence of particular poisons; the power of sympathy in extending disease; and the nature and causes of mortification. Next he prepares us for understanding the phenomena of inflammation, by examining what may be called the materials which are used, and the instruments which operate on those materials, in producing those phenomena. The materials are the blood, and the instruments are the bloodvessels. We apprehend that these subjects had never been viewed in so just a light before his time, as that in which he has placed them; and although they have been the subjects of many subsequent experiments and discussions, these have for the most part confirmed the observations and conclusions contained in his work. doctrine respecting the life of the blood, was, and is perhaps, considered the most questionable of any advanced by this great physiologist; and yet few would be ready to deny that this fluid has properties very different from any thing found in common matter. The mind resists this doctrine in consequence of understanding it to mean more than it does; from supposing that when life is attributed to the blood, all those properties, which belong to living beings, are attributed to it. Now it is intended to say only, that so far as the blood has properties not to be found in common matter, and properties which are destroyed by absolute death, in the same manner as the vital properties of the solid parts are destroyed, so

far there is evidence of life in the blood.

The investigation of the properties of the blood, and of the functions of the vascular system, occupy the first part of Mr. Hunter's great work. The second part relates to inflammation. He distinguishes three processes in this disease, or as he denominates them, three kinds of inflammation. These are the adhesive, the suppurative and the ulcerative processes. He shows the occasions on which they occur in parts of different structures, the phenomena they present, and the purposes which they effect; and he discusses in a very able manner their causes. He describes likewise the different restorative processes, by which inflammation is brought to a favourable termination. The constitutional affections induced by these various processes, and under different circumstances of inflammation, and the influence of the general diathesis and state of health on the local disease, are all considered and explained.

The third part relates to the treatment of abscesses, and the fourth to gun-shot wounds. If his opinions on these subjects have not been universally adopted, he has at least placed the subjects themselves in such a light, as to prevent the thousand errors of treatment and the tortures, to which mere empiricism, or the more cruel practices of the scientific surgeon, formerly

subjected unhappy sufferers.

After this very imperfect analysis of the contents of this work, in which it has not been attempted to show, in detail, the merits of the author, we must remark on one point, in respect to which his views have been considered original and highly important. This is his remark that inflammation derives its character, not only from the causes which produce it, and from the constitution of the subject, but also from the part in which it takes place. He shows that different textures are affected in their own modes, and he shows the final cause, or the advantages of the mode peculiar or appropriate to each texture. The general doctrines, which he lays down on this subject, he confirms by the exceptions which sometimes occur, explaining the causes of their occurrence. These doctrines have since* been confirmed by many other persons, and they have been elaborated in a most able manner by that justly celebrated

^{*} It is true that Dr. Carmichael Smith published similar doctrines in 1790, three years before Mr. Hunter's work appeared; but we believe that these doctrines had been fully promulgated by Mr. Hunter in his lectures many years previously.

French physician, M. Bichat, in his treatise on the membranes,

and in his general anatomy.

In the praise which has been bestowed upon Mr. Hunter, it is not meant to intimate that he never erred. But this may be said, that among the few persons who have opposed his opinions, no one has successfully controverted any important facts, nor

any essential doctrines.

If it would not extend this article to too great a length, the different publications of Mr. Hunter would be distinctly noticed, particularly his original observations on the digestion of the stomach, his very perfect work on the teeth, and that masterly production on venereal diseases, in which he displayed so much accuracy and acuteness of discrimination, and in which he seems to have brought order out of confusion. To strengthen ourselves in the commendation we have bestowed on him, we might also mention the high estimation, in which he was held by his most distinguished contemporaries in the scientific world, and the honours he received from many learned societies, both at home and abroad. It must not be omitted that his great museum remains a most noble and splendid monument to his memory. This we trust will be long preserved to instruct posterity, and to enable them in some measure to estimate his labours, and the extent of his researches. The Hunterian museum contains upwards of 14,000 preparations, wet and dry, besides a very extensive and valuable collection of fossils. A few years after the death of Mr. Hunter, the government of his country purchased the whole for 15,000 pounds sterling, a price thought much below its real value. They gave it to the royal college of surgeons, and have since appropriated nearly double that sum for a building to receive and preserve it.

Mr. Hunter's private character seems to be marked by great moral integrity. His feelings were strong and ardent, but his temper was irascible. He was nevertheless kind, humane and generous, and he was thought to be frank and unreserved to a fault. He was of a lofty and independent spirit, and, above all things, had a sincere and stedfast love of truth. He gained the affections of those who were most about him, and who knew him best, except only those whose relations to him were such as to permit him to be the object of their envy. This was not produced by any ostentatious display on his part; but perhaps more caution and deference to those, whose age and rank made them at least his equals, might have prevented the excitement of this passion. It is said that his private pupils were very

strongly attached to him, and he numbered among them, men whose names have since acquired extensive and well-merited celebrity. Among these we need only mention Dr. Physick of our own country, and the immortal Jenner of Great Britain.

The work before us, the publication of which has given occasion to this article, is from one who understood his great master as well, perhaps, as any who had the rare privilege of instruction from such a source. It is not on this work alone, however, that Dr. Adams may depend for connecting his name by a most honourable tie with that of John Hunter. At a very early period of life the former gentleman published the work on "Morbid Poisons," which is so well known. In that inestimable book some of the most important doctrines of Mr. Hunter's are explained, confirmed and extended in a manner most highly creditable to the intelligence, acuteness and learning of the author.

INTELLIGENCE.

Foreign.

Case of the late Princess Charlotte of Wales.

Profession expected from them some account of this case, the lamentable termination of which has spread such a settled gloom over the British Empire; immediately, on learning that the Physicians who attended it did not mean to publish any statement, (a resolution in the propriety of which, under the circumstances, they perfectly coincide,) strenuously endeavoured to obtain every information respecting it, from such sources as could be depended on. Their exertions have been successful, and they are now enabled to present a report to their readers, which may be regarded as strictly authentic.

The Princess Charlotte, previous to her confinement, was in good health, and immediately under the eye of her accoucher, Sir Richard Croft, who resided at Clermont for three weeks, up to the moment in which she was taken ill. Dr. Baillie, also, was in attendance, chiefly, we have been informed, on account of a promise exacted from him by the Princess, that he would be near her on this occasion. Her spirits were excellent, and she anticipated only the most favourable issue

of the event which was hourly expected.

She was first made sensible of her approaching delivery at seven o'clock, on Monday evening, the third of November; but the labour pains were so inefficient, although acute, as scarcely to evacuate the water, which had ruptured the membranes at the commencement of the labour; a circumstance, however, which every accoucheur knows prognosticates nothing either uncommon or untoward. In this manner the labour proceeded, slowly, for twenty-six hours; the Princess being frequently up and walking about, from finding that the pains almost left her when she was in the recumbent posture. About this time,

also, judging from the inefficiency of the pains, and the little progress made in the labour, we understand Sir Richard Croft suspected that there were either twins, or that there existed some irregular action of the uterus: and, as it was probable a consultation might ultimately be required, he wrote to Dr. John Sims, requesting his immediate attendance. He had, in the mean time, provided whatever could be wanted, should it be

found expedient to have recourse to artificial delivery.

Dr. Sims arrived at Clermont at two o'clock in the morning of Wednesday, but did not then see the Princess; and, as the cause of this has been grossly mis-stated, we think it proper, in justification of an honourable man, and so highly respected a member of the profession as Sir Richard Croft is well known to be, to state, that we have been informed, from a quarter which we must credit, that it was proposed by Sir Richard to Dr. Sims, that he should then be introduced to the Princess; but both Dr. Sims himself and Dr. Baillie thought his presence, at that time, could not be productive of any benefit, but might agitate the patient. Dr. Sims, therefore, declined entering the lying-in room. No consultation was at this period necessary, as the labour was evidently advancing, although slowly: but, on hearing the statement of the situation of the Princess from Sir Richard Croft, Dr. Sims concurred in the opinion that every thing should be left to Nature.

About noon, on Wednesday, it was first suspected that the child might be dead, or that it might be born in a state of suspended animation; and every known means of recovery were immediately prepared. Still the labour continued to be scarcely progressive, the pains being such as tend to forward birth rather by moulding the head so as to admit of its easy passage, than by forcible expulsion. When this was completed, the pains became more efficient; and, at the termination of fifty hours from the commencement of the labour, the Princess was delivered, by natural efforts, of a still-born male child. No great discharge followed the birth; but it was soon discovered that the uterus was acting irregularly, and taking on the hourglass contraction; and an unfavourable separation of the placenta was anticipated. This likewise, in some degree, ac-

counted for the protracted character of the labour.

At half past nine o'clock, a discharge of blood occured. Dr. Sims, who was then employed in an adjoining room in endeavours to re-animate the infant, was instantly informed of this occurrence; and, in consultation with Sir Richard Croft, agreed that the immediate separation and removal of the after-birth was necessary. It was effected with little difficulty, and was

followed by a very trifling discharge either of fluid or coagulated blood.

The Princess was now as well and composed as ladies usually are immediately after delivery; and continued so until a quarter before twelve o'clock, taking frequently small supplies of nourishment: but at this time she became restless and rather talkative, and complained of being sick. She vomited, but nothing was ejected, except a little camphor julep, which she had taken; and at this moment her pulse was firm, steady, and under a hundred. She again was composed. About half past twelve, however, the breathing became impeded; the respiratory organs were evidently under the influence of spasm, and continued in that state until she breathed her last, at half past two o'clock; exactly five hours and a half after her delivery.

In this afflicting state of the case, Dr. Baillie and Dr. Sims, who had been called into the room when the breathing first becamed affected, united their judgment and their skill with that of Sir Richard Croft, but in vain, to avert the impending calamity. Art proved unavailing, although every thing which it could devise, and which Experience could suggest, was at-

empted.

On the seventh of November, the body was opened by Sir Everard Home, assisted by Sir David Dundas, Mr. Brande, and the Apothecary of Prince Leopold's Household; and, we believe, the following is a pretty accurate statement of the ap-

pearances these gentlemen observed:

The membranes of the brain presented their natural aspect. The vessels of the pia mater were less distended with blood than was to be expected after so severe a labour. The ventricles of the brain contained very little fluid. The plexus choroides was of a pale colour, and the substance of the brain had its natural texture.

The pericardium contained two ounces of red coloured fluid. The heart itself and the lungs were in a natural state. The stomach contained nearly three pints of liquid. The colon was distended with air. The kidneys and other abdominal viscera were in a natural state.

The uterus contained a considerable quantity of blood, and extended as high up in the abdomen as the navel; and the

hour-glass contraction was still very apparent.

The foregoing narrative throws very little light upon the immediate cause of the death of the Princess. The fluid found in the pericardium might have obstructed the due action of the heart; but it is not easy to account for its presence there, nor to conceive how so large a quantity could have been effused

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during the short space of time that supervened to delivery, before the breathing became impeded. The quantity of the blood which was found in the uterus might have induced exhaustion; but this opinion can only be conjectural, as it is impossible to draw any certain inference from the rather indefinite expression "considerable," contained in the Report of the Surgeons. Imagination indeed has been busy, and a phalanx of casual circumstances have been arranged to account for the dissolution; some of which are ungenerously and too unguardedly, not to say maliciously, calculated to attach blame to her attendants; but we must deprecate such expositions, as unjust to the individuals concerned, and in no degree honourable to the Profession.

We have been informed that the whole of the Royal Family are liable to spasms of a violent description; and to this here-ditary predisposition, and the increased excitability of the amiable sufferer, owing to the tedious nature of the labour, are we left to ascribe an event, which has destroyed the flattering hopes of the Nation, and lopped off the fairest branch from the

stem of its Monarchal Succession.

Med. Repository.

Observations on the Treatment of Syphilis without Mercury. By John Thomson, M. D. Professor of Surgery to the Royal College of Surgeons, Edinburgh, &c. and Surgeon to the Forces. Communicated to Dr. Duncan, Jun.

[From the Edinburgh Medical and Surgical Journal.]

DEAR Sir,—I regret that I have been prevented, by various avocations, from fulfilling my promise of giving you an account of the observations which, for a series of years, I have had occasion to make respecting the treatment of syphilis without mercury. But, if the following brief statement of the general results of these observations shall appear to you worthy of a place in your Journal, you will oblige me by inserting it.

I was led, many years ago, by a careful investigation into the history of syphilis, and by having had occasion to see a considerable number of anomalous and untractable cases, treated by full, but ineffectual courses of mercury, to doubt the justness of the opinion so generally received, that mercury, in some one or other of its forms, is the only safe, effectual, and specific remedy for the cure of that disease. These doubts

were much increased by the discussions to which the various communications made to the late Dr. Beddoes gave rise, respecting the efficacy of nitric acid in venereal complaints; by the appearance of Mr. Abernethy's valuable publication on the diseases resembling syphilis; and by conversations, at different times, with my friend Mr. Pearson of the Lock Hospital, as well as by the perusal of notes taken from his excellent lectures upon that subject. In the uncertainty in which I was respecting the proper diagnostic marks of constitutional syphilis, I resolved, in the treatment of those cases that should come under my care, in which mercury had had a full trial, and particularly in which it seemed to have produced injurious effects, to abstain altogether from prescribing that remedy, till a trial should be made of some of the other remedies which had at different times acquired reputation for the cure of venereal complaints. That which I made choice of was the simple decoction of sarsaparilla; and, after a very ample employment of this substance, I feel myself compelled to adopt the opinions of some of the earlier writers on the venereal disease, with regard to the singular efficacy of this root in curing symptoms which have usually been reputed syphilitic; and also, with a few exceptions, to believe in the justness of the conclusions to which the late Sir William Fordyce had been led from an extensive trial of sarsaparilla. I have employed this remedy in every form of the disease, which either remains after, or succeeds to, the use of mercury, and have had the satisfaction to observe all manner of cutaneous eruptions and ulcerations, ulcerations of the throat, pains and swellings of the joints and ligaments, and nodes of the bones, gradually disappear under its mild operation, when its use was duly persisted in, and was, at the same time, accompanied by attention to regimen, and the proper local treatment. In particular cases, the recovery has been tedious, and it has been necessary to have recourse to the use of the sarsaparilla a second, or even a third time. may however remark, that I have never had occasion to see the venereal diseases in which it was employed make those rapid and alarming advances which we see so often occur in them during the use of mercury, nor am I aware of any permanently injurious effects which the sarsaparilla produces, either immediately, or remotely, upon the constitution.

Various circumstances induce me to believe, that sarsaparilla has formed a principal ingredient in the composition of the greater number of the secret remedies which have been sold in every country of Europe for the cure of syphilis, and which have, I believe, been found chiefly useful in those cases in

which that disease has appeared to remain in the constitution after the full and repeated use of mercury. I find the sarsaparilla mentioned as an ingredient in most of the antivenereal prescriptions of the irregular practitioners, and, in particular, in those of Sintelaer, the vender of a secret remedy for the cure of the venereal disease, who practised in London about the beginning of the last century, and who appears to me to have anticipated some of the observations and discoveries upon this subject which have been made in our times. In carrying on the observations to which I have alluded, it was with no small satisfaction that I accidentally found, about six years ago, the work of this practitioner, in the library of my friend, Dr. Stedman of Kinross, entitled "The Scourge of Venus and Mercury, represented in a treatise of the venereal disease, giving a succinct, but most exact account of the nature, causes, signs, degrees, and symptoms of that dreadful distemper, and the fatal consequences arising from mercurial cures, with the several ways of taking that infection," &c. "Unto which is added, the true way of curing not only the consummate and inveterate, but also the mercurial pox, found to be more dangerous than the pox itself. The whole illustrated by many authentic and unquestionable accounts of cures performed after the patients were reduced to the very brink of the grave by mercurial operations, the like not as yet extant." By J. Sintelaer, practitioner in physic, London, 1709.

That I have not mistaken the nature, nor overrated the value of the hints contained in this book, and which tended to confirm me in the soundness of the conclusions to which I had been previously led regarding the treatment of venereal diseases without mercury, will appear, I trust, from the following extract, selected from among many passages of a similar

import.

"When, after the imperfect or preposterous cure of a consummated pox, by mercurial salivations, or sometimes also by over violent, and too frequent mercurial vomitives, there appear such symptoms as are most commonly observed in the most inveterate or radicated pox, you may then rationally conclude, that they are not so much the remnants of the former pox, but rather the symptoms of a disease of its own kind, being occasioned either altogether by the natural malignity and virulency of the mercurial preparations, by which these salivations or violent vomiting were raised, or at least by the intermixture of the mercury with some small remnants of the pocky ferment, which otherwise might either have been expelled or subdued by the strength of nature; but its virulency being now exalted

by the malignity of the mercury, it appears attended with much more violent, and much more dangerous symptoms after the mercurial cure, than it did before.

"Hence it is that a certain modern author is forced to confess, that he believes that there are more fallen noses, corroded palates, and rotten bones, occasioned by the mercury, than by

the pox.

"So that if you observe, that after the cure of the pox by mercurial medicines, either some fresh pocky symptoms, such as did not appear before, but especially such as make their appearance in the glandulous and bony parts, as ulcers in the mouth and palate, or the roof of the mouth, and violent and continual pain in the bones; I say, if you find these symptoms appear after a cure of the pox by mercury, when nothing of it was observed before; or if you find these, and other such like symptoms which discovered themselves before the said cure, become afterward more violent and frequent, you may then be fully convinced, that they owe their origin chiefly to the malignity of the mercury, or at least to its intermixture with some slight remnants of the old pocky ferment, whence it is, that we have given it the name of a mercurial or symptomatical pox."

In the want of an accurate diagnostic symptom between syphilitic chancre and ordinary ulceration, and often also from the situation of a patient, upon his first applying to me, rendering it improper for him to undergo a course of mercury, I had for many years frequently been induced to treat primary venereal sores with simple local remedies. The great number of these sores which disappeared under this treatment, some with, and others without, the formation of bubo, and many of them possessing all the characters usually attributed to syphilitic chancre, rendered me extremely desirous to ascertain whether there be indeed any primary venereal sores which are not capable of being healed without the use of mercury. opportunity for bringing this matter to the test of public experiment, has been afforded me in the practice of the Consolidated Depôt Hospital in Edinburgh Castle, to the charge of which, through the kindness of the Director General of the Army Medical Department, I was appointed in March, 1816. In this hospital, open to the inspection of all the medical military officers attending the University, I have, since that period, carefully abstained from the employment of mercury, not only in the treatment of secondary, but also in that of the primary symptoms of syphilis, and have found that chancre and bubo have in every instance disappeared under an antiphlogistic regimen, rest in the horizontal position, and mild local applications, as speedily as I had ever seen them disappear in similar cases in which mercury was employed. In the management of these cases, I have had the able assistance of Hospital-Mate Macgibbon, and of Assistant Staff-Surgeon Blackadder. The mild manner in which both chancres and suppurating buboes were observed to heal under this treatment in the Depôt Hospital, induced the late Mr. Hicks to follow a similar practice in the treatment of the men affected with syphilis of the 92d regiment, at that time stationed in Edinburgh Castle. The results which this gentleman obtained in the cases so treated, and which I had an opportunity of seeing until the regiment marched for Ireland, in April, 1817, were precisely similar to those which I had obtained in the Depôt Hospital.

In the course of reporting the cases in these hospitals for my clinical lectures on military medicine, I was surprised to be informed, in February 1317, by Mr. Kenning, resident surgeon of the Ordnance Medical Department, that a practice similar to that which I was following in syphilitic cases had been employed for a considerable period (I have reason to believe even some time previously to my appointment to the Depôt Hospital) by Mr. Rose, surgeon of the Coldstream Guards, and I was happy to learn, that the results of his practice were similar

to mine.

Soon after this period, the 88th regiment arriving here from France to replace the 92d, I found, that, in consequence of communications from London, the medical officers of this regiment had begun a short time before to treat all their syphilitic cases without mercury; and since that time, up to the present date, I have had an opportunity of seeing a very great number of syphilitic cases in this regiment treated in this manner, with uniform success, under the judicious management of Surgeon Johnston, and Assistant Surgeon Bartlett.

In private practice, I have followed a similar mode of treatment in a great number of syphilitic cases, many of which were seen by my friend Mr. Turner, who for several years lived with me, and assisted me in my practice; and in treating these cases, I have obtained results in all respects similar to those stated to have taken place in the military hospitals.

Bubo in one or both groins, sometimes suppurating, and in other instances disappearing by resolution, has occurred in about one fourth of those affected with chancre, but in none of the chancres or buboes which I have seen treated without mercury, has any disposition to gangrenous inflammation, or to phagedenic ulceration, ever manifested itself,—occurrences which are so common in the treatment of these affections, under

even the most careful employment of mercury. In a number of the cases of chancre, a hard tubercle, accompanied with discoloration of the skin, has been observed to remain for a considerable time after cicatrization, and this part has frequently shewn a disposition to become ulcerated, when it has either

been neglected or has been irritated.

A sufficient length of time has not yet elapsed to enable us to ascertain in how many cases constitutional affections will occur, or what all the constitutional affections may be among those who have been cured of the primary symptoms of syphilis without the use of mercury. Of the cases which I have seen, the number in which constitutional symptoms have supervened, has not exceeded one in ten; and the only forms of these symptoms which have presented themselves are ulcerations of the throat, and cutaneous eruptions, sometimes accompanied by inflammation of the eyes. The ulcerations of the throat have been few in number, and generally accompanied with cutaneous eruption; they have had an aphthous appearance, and have sometimes been attended with aphthæ of the inside of the month, enlargement of the tonsils, and swelling of the lymphatic glands of the neck. The cutaneous affections which have occurred have been, in several cases, a reddish mottled efflorescence of the skin, resembling roseola, in others, papular, pustular, scaly, or tubercular eruptions. These secondary symptoms have usually appeared in cases where the primary sores had been long in healing, and where they had left behind them indurated cicatrices. The time at which they have generally occurred, has varied from four to twelve weeks after the appearance of the primary ulcer. The affections of the throat have been slight in comparison with those which usually take place in venereal cases after the use of mercury. The cutaneous eruptions have been chronic in their nature, and have all, as well as the sore throats and inflammations of the eye, gradually, though sometimes slowly, disappeared without the use of mercury, and without seeming to have left any injurious effects behind them. I am inclined to believe, that, if mercury had been employed, the cutaneous affections, in several of these cases, might have been cured in a shorter period of time than that in which they have disappeared; but whether, in accelerating the cure of the cutaneous eruption, that remedy might not have excited other constitutional affections is a point which future experience can alone determine.

The secondary symptoms of syphilis, I may remark, have not appeared to me to, be more frequent in their occurrence in those patients who have been treated without mercury, than in those by whom that remedy has been freely employed. Hitherto I have had no opportunity of observing among patients
treated for the primary symptoms without mercury, any of
those deep or foul ulcers of the skin, of the throat, of the mouth
and nose, or of the painful affections of the bones, which are
stated by every writer on syphilis, as the genuine products of
that disease. Among the very great number of such affections which have presented themselves to my observation, one,
or more frequently more than one, course of mercury had been
employed.

The results I have now stated to you are satisfactory, I conceive, in so far as they seem to establish the possibility of every symptom of syphilis being cured without the use of mercury, and by this to lead to applications of the utmost

importance in practice.

They also have a confirmation in, while they enable us to explain, the numerous, and apparently contradictory, statements which have at different times been given with regard to the efficacy of the various remedies which have been extolled for the cure of syphilis, from the first appearance of that

disease in Europe to the present day.

Indeed, all the observations which I have had an opportunity of making upon the symptoms and progress of syphilis, tend to confirm me in an opinion which I have for several years taught in my lectures, that it is a chronic and not an acute disease; and that the rapid progress which it seems sometimes to make, and the exasperated symptoms which it exhibits, are not the genuine or necessary effects of syphilis, but may, in most instances, be traced to intemperance, to neglect, or to improper treatment.

What then, it may be asked, is the practical conclusion to which these views lead in the treatment of syphilis? Are we to abandon the use of mercury,—to reject it as a remedy which is unnecessary, and that may be injurious; and if mercury be laid aside, must we employ other remedies, such as guiacum, sarsaparilla, or nitric acid, in its place; or may we safely trust the cure of this disease to the powers of nature

alone?

Many years, I conceive, must elapse, before a satisfactory answer can be given to these questions. To be able to answer them, it must be ascertained, whether syphilis undergoes a spontaneous cure in all the forms in which it appears; and upon this being established, it must be also ascertained, whether by any, and by what means of treatment, the progress of this spontaneous cure may be accelerated or retarded.

The effect of mercury in accelerating the cure of syphilis seems to be too well established to admit of its being called in question; but in how far the use of this substance may or may not give a tendency to the recurrence of the disease in a more aggravated form, or may induce diseases different from, but resembling those described as arising from syphilis, are points still far from being sufficiently determined. The belief that syphilis can be cured safely and ultimately only by the use of mercury, is so deeply rooted in the minds of the public, and the prejudices of practitioners, are so much biassed in favour of the employment of that remedy for the cure of syphilis, that we cannot expect that its use, whether it shall be ultimately found to be necessary or not, will be generally given up, at least for a long time to come, in the private practice of our profession.

The practice however of treating venereal cases without the use of mercury, has now become very general in the British military hospitals, both at home and in France; and by a communication which I have had the pleasure to receive, at the desire of Sir James M'Grigor, from my friend Dr. Theodore Gordon, I have reason to believe, that the results obtained do not differ materially from those which I have described. These results will soon, I hope, be communicated to the public; and much valuable information may be expected from the medical officers of the army who have devoted their attention to this subject, and whose situation affords them so much better opportunities than medical practitioners enjoy in the practice of civil life, of ascertaining whatever relates to the natural

bistory or treatment of syphilis.

The following table of the cases which have been treated without mercury in the military hospitals here, since March 1816, exhibits a summary view of some of the results which have been detailed. I remain,

Dear Sir,

Very truly your's, JOHN THOMSON, M. D.

5, George Street, 8th December, 1817.

Abstract of the cases of Primary Venereal Symptoms treated without the use of Mercury in the Consolidated Depôt Hospital, and in the Regimental Hospitals of the 92d and 88th Regiments in Edinburgh Castle, from March, 1816, to December, 1817.

Number of cases of primary symptoms treated,

155

Of these had buboes, a considerable portion of which sup-	
purated,	54
All cured.	
Of these cases, secondary symptoms have supervened in	14
In the form of ulceration in the throat in . 1	
of ulceration of the throat with cutaneous	
eruption in	2
of cutaneous eruptions alone in . 10)
of cutaneous eruption with iritis in . 1	*
All of which have disappeared.	

On Wounds of the Stomach.

BARON PERCY read, at a recent Sitting of the Faculty of Medicine, a memoir on a wound of the stomach, with Hernia, occasioned by the patient, a boy of twelve years of age, falling from a tree upon a stake in a hedge:—the aliments he had taken escaped by the wound, and were also returned to the mouth by violent vomiting. The intestines were returned, and the wound sewed up; and, with great attention, the boy was cured. The memoir which we thus abstract was accompanied with an important commentary by the learned Professor, which

we shall give at length.

In order that the stomach should be wounded, it required that it should be in a state of repletion, which is generally the case in wounds of this nature which happen after orgies, or in a state of intoxication; but in this case they are nearly always mortal, from the effusion of alimentary matters in the abdominal cavity; at least, unless a happy chance similar to that which saved the life of this youth,—the viscus present itself immediately at the external wound, and is thus evacuated. In twenty sword, bayonet, and knife wounds, with lesion of the stomach, I do not recollect having seen above four or five recover. Our André Paré found the chances of recovery still more rare; therefore, he recommends not to touch these wounds, which he considered mortal, except Nature, as she sometimes does, worked a miracle.

This was the opinion of the surgeons of his time, and the tradition was deduced from the Arabs, though they made an exception, which Paré forgot to make. It is that, when the

^{*} In seven other cases of eruption, attended with iritis, which have occurred to my observation, the disease has been cured without the use of mercury.

J. T.

external wound is large, that of the stomach is to be sewed up. Ventriculi vero vulnus naturæ demittatur, et si amplum fuerit, si potest, ut de intestinis dictum est, conseratur. shews us that the most ancient surgeons practised the suture of the intestines, and it is proved that they knew the method attributed to Rhamdor. André de la Croix, from whom I have borrowed the above passage, insists, as a condition, on the size of the wound in the teguments and muscles; but he does not advise the establishing it if it do not exist, and few authors have thought of this plan, which, at the present day, would present no difficulties to an experienced surgeon. The experiments made by the late M. le Gallois, and myself (who simply served him as assistant,) on dogs, whose stomachs we opened and sewed up, and cured in a very little time-those which Messieurs Majendie, Marjolin, and Beclard, have also made with the same result-support our opinion; in favour of which, indeed, I could cite a great number of facts. I will commence with one of the most recent :- M. Richstrat, having had to treat a workman who had received a wound in the epigastic region, judged, from the substance which escaped by the wound, and at the same time by the mouth, that the stomach was wounded; and, as the lesion corresponded with that of the parietes of the abdomen, which was above two inches long, he drew out for a moment the ventricle, and made on it five points of suture. The patient was cured; but M. Kluyskein, of Ghent, who briefly relates this case in the Annals of Foreign Medical Literature, vol. ii. page 289, does not specify the species of suture he made, which it would be extremely curious and important to know, for it is a very different thing to use the suture called that of Pelletier, absurdly recommended by the greater part of medical works, and that with loops. the latter that I preferred the only time that I had to make a suture of the stomach. It was in a drummer of the 109th demibrigade belonging to the corps commanded by general Lecourbe, and during the Swiss war. The drummer, having the fever, and being scarcely able to crawl along, had remained behind, when we retreated before Suwarrow. Some Piedmontese troops of the vanguard of the Russian army came up with him, and, in the most cowardly manner, stabbed him in the body five times with their sabres. They were all in the abdomen: the one situated near the left hypochondrium was four fingers long, and had opened the stomach. Sour milk, with which this unfortunate man had slaked his thirst an hour before, issued from the wound. The enemy's vanguard being repulsed, our brave surgeons brought off the drummer. He

was in a dying state. Every effort that he made to vomit, the stomach presented itself at the wound, with its division, by which clotted milk still continued to exude. The surgeonmajor Briot, and myself, determined to draw it out with our fingers and dissecting forceps, and to make a continued, but very loose, suture; in the loops of which we placed a pencil one of our assistants lent us, and of which each end rested on the teguments beyond the points of union of the external wound: by this means, the stomach could neither withdraw or conceal internally its wound, and we had the power of closing the suture at pleasure. The fate of our army becoming every day more uncertain, the drummer was removed with great precaution, first to Zurich, where he was attended by the surgeonmajor Willaume, and afterwards to Koningsfelden, where my colleague Bacon attended him, and had the satisfaction to see him cured. The threads were cut and withdrawn the twenty-

eighth day.

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It is not known what kind of suture was made by the brothers Schenkel on the inhabitant of Fulda who had the stomach opened by the wound of a hunting-knife, and which they were fortunate enough to cure. Nor are we acquainted with that made by Floriano Mathis on the peasant, from the stomach of whom he extracted, by incision, a knife nine inches long, which had been swallowed for a wager some months before. Three examples of cultrivores (knife-swallowers,—Trans.) on which the operation was successfully made, my honourable colleagues Des Genettes and Larrey saw, as well as myself, in the library of Koningsberg, the knife which had been extracted from the stomach of one of them. The surgeon who operated on William Clark in 1699, did not fail to stitch up the stomach, leaving the ends of the thread outside the wound: this was acting with prudence and method, but of what kind the suture was we do not know. It is, however, far from being an indifferent matter. The suture of Pelletier is to be proscribed in this case, although several very respectable practitioners advise If it be easy to make, when, across a large wound, the stomach is accessible to the fingers and the needle: it is extremely difficult to undo when the cicatrix is nearly terminated: it is, besides, subject to tear in a multitude of points, which have also the inconvenience of increasing the irritation of the organ. I say the irritation, for we cannot refuse to the stomach a considerable degree of irritability; but it is contractile, as the author of the note asserts, who says that when he handled it he felt it contract and expand alternately; but which, after all, could only extend to a contractility of the tissue, and does not

invalidate the result of the experiments of which M. Majendie has rendered us witnesses.

The author here makes some observations on the obscurity of the memoir, and then adds, To conclude, the object of the suture, be it of what kind it may, is not immediately to unite the lips of the wound of the gastric members, but to render oneself master of this union, and to prevent, as we have already observed, and of which no one can be ignorant, the effusion of the aliments, beverage, blood, and pus in the abdominal cavity. It may be proper to observe, that divided membranes do not heal between themselves: it is by their adherence to the parts with which we hold them in contact that their wounds are cured.—Med. and Phys. Journal.

Sulphate of Zinc recommended as a remedy in psora by Dr. and Prof. Harles of Erlangen.

SULPHATE of Zinc, or white vitriol has hitherto not been recommended as an external remedy in psora, except in the form of an unguent, as in the Ung antiscabios. Jasseri; in this form however it does but seldom answer our expectations, from the same reason, that other powerful remedies do frequently disappoint us in curing this disorder.

Dr. H. has had a vast number of scabious patients in the clinicum at Erlangen, and consequently had ample opportunities, to try and compare the effects of a great variety of such remedies, whose effects had been particularly praised on difference of the contract of the

rent occasions.

Sulphur given internally as well as externally, in the dry and simple itch, did not only frequently disappoint both the Dr. and the patient, but generally did no service at all, in the pustulous and wet dartrous itch. The cure was generally too tedious; the exantheme reappeared with increased strength, after being seemingly cured, and got even worse instead of better.

Of the external application of the well known mercurials, the solution of sublimate, and the Ung. Werlhofii, and particularly of the former, Dr. H. saw sometimes good effects, they appeared however in the inflammatory state of the exantheme, and in plethoric and irritable habits, to act rather prejudicial, by increasing both pain and inflammation. Besides this, the process of absorption is to be regarded, on which account those remedies must not be continued too long,

Tartarized antimony Dr. H. has but twice made use of externally, in a herpetic itch, once in a watery solution, and once as ointment, but was soon forced to give it up, on account of the

disorder getting worse.

As to the use of the diluted sulphuric acid, he found that this remedy is not only very slow in its operation, and that it sometimes entirely disappoints; but also that its being applicable can be but very limited, as it can be applied with good effect, only when a general debility of the lymphatic and cuticular system, together with cacochymy prevails.

The treatment with an aqueous solution of soap, he considers to be a very good adjuvans, in cures of simple itch, but alone, it is in most cases of no greater service, than the decoctions of mucilaginous, or mucilaginous-astringent vegetables, of which

elm bark is the most useful.

Among the acrid vegetables Dr. H. has hitherto given the preference to the Elecampane in saturated decoctions, in the form of a wash, yet he thinks it far less efficacious, than the analogous remedies of the mineral kingdom, particularly white praecipitate of quicksilver, sublimate, diluted ley and soap.

The result of all his experiments and observations was, that none of these remedies acted so quick as might be wished, and a watery solution of sulphate of zinc used as a wash, was always found the best. Dr. H. has used this remedy in more than forty of the most different cases, and always with a speedy and perfectly good success, and without any further consequences. The eruption did not, as is the case with the other remedies, increase in the beginning, but decreased from the very first days, and was generally completely removed after a perseverance of eight or ten days. Only in a rather inflammatory form of the pustulous itch, this remedy could not be applied, for the same reason, as it cannot be indicated in syphilitic itch.

If the disorder has been of long standing, a few mild purges being previously given, the patient takes for a few days some sulphur and cream of Tartar, and after this, all the places, where there is any eruption, are washed twice or thrice a day

with the following wash:

R Sulphatis Zinci 3j ad 3ij Decoct. ulm. 3iss ad 3ij M.

The proportion of the white vitriol was but in very few instances increased. In very recent and slight cases, the wash was employed without any previous preparation; warm baths are often employed at the same time.

This method is also to be recommended on account of its cheapness, a point deserving particular notice in civil and military hospitals, where the disorder spreads in an uncommon manner.—Continental Medical Repertory.

Medical use of Cobwebs.

DR. LUDER TOEL, of Jever, in his inaugural dissertation, cogitata quaedam circa telae aranearum in febribus intermittentibus usum, relates the cobweb to be in Holland a popular remedy against ague, and gives it as his opinion, as the spider forms his web from his own secretory organs, it is very possible, that it may have some effect on the human body, and he says that eight grains of cobwebs, fresh gathered and cleaned, made up into seven pills with mucilage of gum arabic, two of which taken shortly before the paroxysm, three during the same, and two shortly after it, will generally have the effect of preventing the next paroxysm.—Ibid.

Account of a Casarean operation, successfully performed by the Subscribers. Translated from the French by Dr. Bossuer, Member of the Massachusetts Medical Society.

Miss Rosette Laferriere Constance, born at St. Pierre, Martinico; of a very ricketty constitution; forty-six inches high; married Mr. Hachard, captain of a vessel, when she was twenty-five years old. She became pregnant soon after her marriage. The four first months of her pregnancy were not attended with any more accidents than is common in such cases, and she enjoyed for the three months following, a very good health; but at the end of that time she began to complain of very severe pains in her back, shortness of breath, and precordial anxiety. By occasional bloodlettings, domestic baths, and aliments taken in a small quantity at once, she carried her child to the full time. I was called to her about noon the 13th of October, 1804. The pains were trifling until half after two, P. M. and then began to increase to such a degree, as not to leave any doubt of a speedy delivery. Half after two the waters broke. By the introduction of my finger, I found a large protuberance at the posterior part of the brim of the pelvis. I supposed, there was hardly an inch and a half of

antero-posterior diameter. Sensible of the dangerous situation of my patient, I sent at seven o'clock, P. M. for Messrs. St. Hilaire Gaubert, and my brother. Both of them acknowledged the vice of conformation and the impossibility of delivering the woman by the natural way. We concluded it was impracticable to extract the child any other way, but by the Cæsarean operation.* The circumstances not being very urgent, we postponed the operation till the next morning. met again the next morning; discussed again her case, and resolved unanimously on the operation. Every thing was then made ready for the Cæsarean operation. The patient was laid on a table stuffed with a matrass; her head and shoulders raised; her legs and thighs put asunder, bent and properly secured. I attempted to discharge the urine; but I found it was impossible to introduce a catheter into the bladder, on account of the bowels forming a kind of bag, hanging over the thighs. I then made an incision in the direction of the linea alba, from an inch below the navel, to an inch and a half above the pubis. The integuments, muscles, and peritony being divided, a portion of the intestines came in sight at the inferior part of the wound; it was reduced immediately, and kept under in such a way, as not to interfere with the operation. I made afterward an incision about three inches and a half long, at the inferior and anterior part of the womb, where I met with the placenta, which I separated and extracted immediately. The child presented the belly, his head resting on the right side of the pelvis, his face forward, and his feet towards the lateral and posterior part of the right loin. I introduced my left hand into the womb. I took hold of the left foot of the child and brought it to the edge of the wound. By that mean the child was turned on its side, and presented the breech; I got my two fingers in the bendings of its thigh, and made the extrac-She had, (it was a girl) a great depression on the vertex, and could hardly breathe. Cordials and spiritous liquors were made use of to revive her. I made two stiches, one on the superior, the other on the inferior part of the wound, where I introduced a slip of fine unravelled linen rag. The rest of the apparatus was composed of dry lint, a bolster and a retentive bandage. The patient bore this operation with great fortitude, She was dressed and carried to her bed, where she took some broth. The child was almost gone. In the afternoon she had fits of convulsion, at first general, afterwards par-

^{*} Embryulcia is not permitted in France, only in cases of a child being actually dead.

tial. Some hydromel was given to her. She could hardly swallow; but she gained by degrees some strength. She had nothing passed her bowels for thirty-six hours, and did not make any water before the third day. She took the breast of one of her aunts. From that time she grew better and better. A watery infusion of Peruvian bark was given to the mother, in order to remove the state of anguish, faintness, attended with coldness on the surface. She laboured until six o'clock, P. M. By that time the pulse began to raise; more heat on the surface; pain at the stomach and nausea. The infusion of bark was left off, and a composing draught was given to her. This draught had no effect upon her. The agitation was the same until she puked some yellow bile from her stomach. The dressing was removed and soaked in an emollient decoction. She had some rest that night; but attended with as much uneasiness and cardialgy as before.

The fifteenth the wound was flabby, the edges mucous; the dressing was made with a decoction of Peruvian bark. Great discharge of the lochia by the wound and vagina. The heat of the os tincæ natural. Great flow of urine during the night. She was very much distressed by wind and cardialgy. Her food this day, was some beef tea, and her drink, some wine and

water.

The sixteenth the state of the wound was the same; dressing with spirits of turpentine and lint, the remainder of the apparatus soaked in a decoction of Peruvian bark camphorated. Some doses of cinchona was given to her at the same time. In the evening, same medicines; but the effect of the spirits of turpentine was so sharp, I was obliged to take it off half an hour after dressing. In the same night, bowels free, secretion of milk, high fever.

The seventeenth, nothing remarkable.

The eighteenth she had some stools; bowels soft, very little

painful; good rest.

The nineteenth the separation of the inferior ligature took place: some dressings; no stools. The evening uncomfortable on account of wandering pains, more moral than physical.

The twentieth. Same state, same moral agitation. The abdomen somewhat tensive; pain in her right side. A watery infusion of Peruvian bark was given to her instead of the powder.

The twenty-first. Perfect ease; separation of the inferior ligature. The flesh of the wound was of a rosy complexion. The fillet of fine rag was taken off; a white pus, but serous,

ran out. The infusion of Peruvian bark is continued.

The twenty-second. Same state; a soup was granted to

gratify her appetite. A glyster in the evening.

The twenty-third. The glyster she had taken the day before, had very good effect; appetite good. In the evening, state of anguish, suppuration small.

The twenty-fourth. Fungous flesh at the wound; same

dressing, with the Peruvian bark.

The twenty-fifth. General uneasiness; the wound of a brownish hue: bolsters and bandage taken off: dressing with worm-weed, (oldenlandia hysopifolia,) muriate of soda, and spirit of sugar. In the evening, high fever; discharge of a serous matter by the vagina. No more heat and sensibility at the os tince than is natural.

The twenty-sixth. Very troublesome night; high fever; bowels distressed by flatulency. Flannels dipt in an emollient decoction, applyed on the bowels, injections and glysters have succeeded to make her more comfortable; urine made plentifully; toward night, a discharge of a florid blood took place by the vagina. A soup allowed.

The twenty-seventh. Good suppuration from the superior part of the wound; proud flesh at the inferior; same discharge from the vagina. The heat of the abdomen being less, the

emollient fermentations were not used any longer.

The twenty-eighth. Same state. The inferior part of the wound begins to be moistened with a laudable pus; more food granted.

The twenty-ninth. Restless night; suppression of the lochia; her distress was removed by emollient fomentations.

The thirtieth. Distressing night, on account of an acute pain on the crest of the left thibia. In the course of the day it extended on the whole side of this extremity; towards night swelling on the ankle of the same side.

The thirty-first: High fever in the night; the left thigh much swelled; emollient fomentations and whey made use of.

November the first. The patient being more comfortable, a gentle physic was given to her; her thigh was covered with

flannel dipt in alkalised water.

The second. This day being the date when the patient, (in a state of health) used to have her menses, a red blood, during the night, made a show through the wound and vagina; an intermission of fever took place; the ædematous thigh was more numb than painful. The slough came off. The bottom of the wound was florid and of a healthy appearance. Dressing today with dry lint.

The third. Plentiful flow of the menses; otherwise nothing

particular.

The fourth, fifth and sixth. The periodical discharge went on cleverly. The swelling of the left thigh entirely subsided. The wound almost healed. The patient begins to walk in her chamber.

The seventh. The periodical discharge almost done; a

gentle physic given.

The eighth, ninth, tenth and eleventh. The cicatrix is nearly complete. The abdomen soft; every function regular; no more impediments in the way. The patient walks all over her house.

The twelfth. The consulting physicians, present at the operation, were assembled, in order to verify the state of the mother, and to determine whether it would be advisable to gratify her keen desire to suckle her child. Taking into consideration, 1st, The ricketty affection of the mother, her constitutional weakness which could not bear the fatigue of nursing; 2d, That it would be dangerous to give to such a weak child vitiated milk; all the consulting physicians unanimously agreed to give to the child a sound and well constitutioned wet nurse, living in the same house with the mother, where she could see and afford to her child all the other comforts of maternity. The radical cure being well ascertained, we have closed and signed the present journal.

D'ARISTE, Jun. D. M. M. DEVEAUX, D. M.

J. H. GAUBERT, Physician in chief of the Civil and Military Hospital of St. Pierre;

J. B. LAVALLEE;

D'ARISTE, SENR. late Surgeon in Chief of the same;

LAFERRIERE CONSTANCE, L. F. HACHARD, HACHARD.

Postscript written at the bottom of this Journal, by the Captain-General of Martinico.

Considering the operation and treatment which Mr. D'Ariste, Jun. has made to Mrs. Hachard ought to be made public for the benefit of mankind, I give leave to this officer of health, to publish this Journal he has presented to me.

VILLARET.

Resolution of the Colonial Prefect of Martinico.

The colonial prefect, taking into consideration the importance of this successful operation, which is not only an honourable proof of the skill of Mr. D'Ariste; but at the same time a triumph in behalf of humanity which is seldom obtained in any climate, and more so in this;

Considering also that its publication may turn to the benefit of mankind, and to the improvement of the art; Resolve, that

Messrs. Thounens, printers, do print two hundred copies of this Journal of Observation at the expense of government.

At St. Pierre, Martinico, the 6th of December, 1804.

LAUSSAT.

Translator's Note.

It is probable the operation of hysterotomy has succeeded in Martinico, because it has been practised on the linea alba; instead of being made, as usual, on the inside, or outside of the rectus. Outwardly, there is danger of wounding some branches of the circumflex, and inwardly the epigastric. The hæmorrhage which inevitably ensues, not only puzzles the operator, renders the operation more tedious, exposes the parts longer to the access of the air, but occasions an effusion of blood in the cavity of the abdomen. Besides, the muscles in that part being thicker, stronger and antagonist, come and keep in contact. They draw forcibly on the stiches, and often lacerate them. This continual stretching and irritation, of course, give rise to more inflammation, spasms and even convulsion. Nay, the position of the wound being more declivous, affords a more easy outlet to the discharges; therefore, keeps the wound longer open to the access of the air.

It is not so when the operation is performed on the lineaalba. In this place there are no large bloodvessels to be cut; the operation is quicker done; the hæmorrhage is trifling; no effusion to be dreaded. Besides, the wound being upwards, the discharges finding an easier issue downwards, keeps in contact, heals quicker, and of course prevents the access of the air.

The application of stiches on the linea alba which is a tendinous and very irritable part, occasions often a series of ner-

vous, inflammatory and even convulsive symptoms.

They are not only dangerous, but useless. The muscles, the peritony and the integuments having been overstretched during pregnancy, come into contact with facility, and may be kept in that way with adhesive plasters and a retentive bandage.

Considering this operation has so well succeeded in a hot climate, where nervous, tetanic and putrid disorders are prevailing, I think it is more likely to succeed in this country.

Observations on the Directions given by various Writers on the Practice of Midnifery, for Turning the Child; with an Account of an Improved Method of performing that Operation. By John Breen, M. D. Licentiate of the King and Queen's College of Physicians in Ireland, late Assistant to the Lying-in Hospital, Dublin.

To suggest an improvement in an operation frequently practised, for more than two centuries, by many eminent men, or to point out a variety in the method of performing it, at first view may appear presumptuous, or even ridiculous. But on reflecting that, in machinery and mechanical contrivances, improvements are daily made that excite surprise, equally by their simplicity and utility, the writer will be pardoned for instituting an inquiry into the best method of performing so important an operation, and questioning the propriety of the practice recommended in books of most approved authority on the subject. As though it may be doubted, whether society has been more benefited or injured by the inventions of the forceps and lever, few practitioners of midwifery will besitate to acknowledge the unequivocal advantages of turning, in certain preternatural presentations, since without this resource, left to unassisted nature, both parent and child would in most

instances perish.

When a well instructed accoucheur is in early attendance, little difficulty occurs in the management of the majority of cases of this description. Very considerable obstacles, however, now and again occur, which, were it the intention of the author to write a dissertation on the general management of preternatural labour, it would be his duty to point out. Such not being the purpose of this paper, it may be allowed to illustrate the occasional difficulties, by reference to writers of deserved eminence, and extensive practice, who describe from actual experience. Mauriceau, Vol. I. p. 268, thus expresses himself: "Cellecy est la plus rude, et la plus laborieuse et penible de toutes les operations de chirurgie, en laquelle le chirurgien sue quelquefois à grosses goutes, meme au plus grand froid de l'hyver, pour la peine et difficulte, qu'il v rencontre ordinairement." Dr. Sims, in the Medical and Physical Journal for June 1802, recommends, in certain difficult cases of arm presentation, to use the crotchet, and deliver in the manner least likely to injure the mother. Dr. Joseph Clark of Dublin, in a letter to Dr. Sims, published in a subsequent number of the same Journal, approves of this practice. These highly respectable authorities sufficiently demonstrate the difficulty that sometimes attends the management of presentations of the shoulder and arm. I do not mean to assert, that the method I recommend will supersede such an expedient, but I conceive it will render the necessity of resorting to it less frequent.

An investigation of the mechanism of the operation of turning, and a demonstration of the best method of performing it, are requisite steps in our inquiry. If it should appear that the most esteemed writers on midwifery have not treated this subject with that degree of attention which its importance merits, such inquiry will be useful at least to the junior practitioner.

To have a clear idea of our subject, it is necessary to consider, in the first place, what is the natural position of the fœtus in utero. It is now fully ascertained, that the child is disposed in such a manner that it may occupy the least possible space. For this purpose the head is inclined on the chest, the spine incurvated forward, and the lower extremities so folded, that the knees are nearly in contact with the upper part of the abdomen, the heels applied to the breech, with the ankles generally crossing each other. The superiour extremities vary in their position, and perhaps will not be found exactly similarly circumstanced in any two cases. On the contrary, the position of the lower extremities, with regard to the trunk, is nearly the same, whatever part may present at the brim of the pelvis in the commencement of labour. In proof of the constancy and uniformity of the relative position of the lower extremities with regard to the trunk, it is observed, that the new-born infant, left to itself, folds its lower limbs in the manner now described. Deviations then from this position must be considered as exceptions to a general law. Hence it would seem to follow, that where it may be necessary to turn the child, the operator should not remove the inferiour extremities from this natural position, provided he can effect his purpose while they remain in it; and it is the principal object of this paper to shew, that, in most instances, he has this power. occupies the least possible space in the uterus in the position described, more power and freedom is given, by this circumstance, to the hand of the operator, consequently any unfavorable situation of the child is more easily altered while it is in this position.

Let us now consider what change of situation the child must undergo where we turn, in preternatural presentations of the superiour extremities. Reflection will satisfy us, that it must revolve on the lesser axis of the trunk, and describe an arch more or less extensive. By the lesser axis will be understood an imaginary line passing from side to side, nearly opposite the umbilicus. It is obvious, that, in all presentations of the superiour parts of the child, where it is turned, this kind of rotatory movement must be effected. The next step is to ascertain how the child can be made revolve with the greatest facility in the manner pointed out. Since the writings of Ambrose Paré, who, in modern times, gave the first positive instructions to turn, most succeeding writers on midwifery, including Mauriceau, Smellie, Baudeloque, Denman, Hamilton, Burns, and Merriman, direct a foot or the feet to be sought for, and the child to be thus turned. The errour of these directions will, I conceive, be made to appear in the progress of this inquiry.

The plate represents one of the most difficult preternatural cases, and is nearly a copy from Smellie, (being his 34th plate,) to avoid the imputation of inventing a position favourable to the illustration of the method now recommended. Were this plate exhibited to an intelligent person, whose mind had not been biassed by such expressions as "tirer par les pieds," "search for the feet and turn," and an inquiry made from such an individual, what would be the best method of changing the situation of the child, so that the head should be removed towards the fundus uteri, little doubt can exist, that he would direct one or two fingers to be hooked in the flexure of the knee, and the other hand to be applied to the presenting part, which should be pushed gently upwards, while the hand engaged in the uterus should be drawn downwards and forwards, towards the centre of the longest diameter of the brim of the pelvis. By thus proceeding, the child would be made revolve on the lesser axis of the trunk, and the foot would be brought into the vagina within the reach of a noose. By adopting a different procedure, and endeavouring to lay hold of a foot, according to the usual directions, it is obvious, that the hand of the operator must traverse a greater space of the uterus, a matter of very considerable difficulty, either when the action of that viscus is strong, or when it is closely contracted on the body of the This difficulty being surmounted, when the foot is laid hold on, it is very apt to slip and recede from the grasp, as well from the violence of uterine action, as from the hand being cramped, and nearly powerless, by reason of the previous exertion. Those of my readers engaged in the practice of midwifery will be well aware, that these difficulties are not imaginary, but such as frequently occur, and cause extreme embarrassment to the practitioner, and much additional pain to the patient. By adhering to the direction of hooking the knee,

the hand of the operator is in a great measure protected during the pains, and he is enabled deliberately to proportion the force requisite to change the position to the resistance he encounters. Besides, as the knees must have been nearly in contact with the superiour part of the abdomen from the earliest development of the extremities of the embryo, should, what may be called accidental circumstances have removed them from this natural and usual position, but little force will be rerequisite to restore them to it. I am satisfied it sometimes. happens in a position such as is represented in the plate, that when the proper measures are not taken in time, that, by the strong and violent action of the uterus, an inferiour extremity may be removed from the natural situation, and a foot brought nearer than the knee to the vagina. In such case it will of course be proper to take hold of the foot in preference to searching for the knee. This occurrence I consider more likely to have frequently taken place when the practice of midwifery was generally entrusted to females; and perhaps it assists in explaining the almost universal direction of writers on the subject, to search for the feet. By a timely introduction of the hand, in the great majority of cases, the knees will be found in a state of flexure near the abdomen.

Having now endeavoured to give a general view of the operation, I will next proceed to point out, more particularly and explicitly, the manner in which it is to be performed. When the practitioner has decided on the propriety of turning, the first thing to be ascertained is, whether the os uteri be sufficiently dilated to allow the introduction of the hand? I pass by the consideration of the few cases in which it may be proper artificially to dilate that part. The state of the os uteri being favourable, the patient is to be placed on her left side, in the manner women are usually delivered in these countries, as, by deviating as little as possible from the ordinary method, our patient and her friends will be the less alarmed, and more satisfied. The hand of the operator, lubricated with some unctuous matter, and forming a conical figure, is to be introduced slowly and cautiously through the vagina and os uteri, along the abdomen of the child, on which, as much as can be, it is to lie at rest during each pain. In the intervals of pain the hand must be pushed upwards until it arrive at one of the knees; one or two fingers should now be hooked in the flexure of this part. The operator must then draw the knee downwards and forward, towards the centre of the great diameter of the brim of the pelvis, and, if any difficulty occur, he will, at the same time, endeavour gently to push up the presenting part. Should the

child still continue jammed, after using moderate force, I would recommend the situation of the hand in utero to be varied, and the fingers to be hooked in the flexure of the other knee. When, by this procedure, one foot is brought within the reach of a noose, it may be sometimes necessary, after applying one, to retrace the same steps to bring the second, within the power of a similar application. By acting according to these directions, I can scarcely conceive the possibility of failure, where it is practicable to introduce the hand. Should the presenting part be so wedged in the pelvis as not to permit this measure with safety, it then becomes a subject for consideration, whether the method of Dr. Sims before mentioned is to be acted on? or whether spontaneous evolution* is to be trusted to? It would be foreign to the purpose of this paper to discuss these points. I must, however, observe, that I have now pointed out difficulties that I have not experienced since I relinquished the practice of searching for the feet, as I have universally found, that, when I reached a knee, the remainder of the operation was easily accomplished.

In my own practice, I always introduce the left hand, per vaginam, for the purpose of having the right uncramped, and, therefore, more efficient in expediting the latter part of the delivery, particularly the quick extrication of the head, on which the preservation of the life of the child so essentially

depends.

In concluding the first part of what I proposed at the commencement of this essay, I can state, that the alteration of practice I suggest is not the hypothesis of the closet, but is an operation that has been often successfully practised. The mode of operating I recommend, first suggested itself to me under circumstances peculiarly embarrassing, where it was nearly impossible to have a consultation,—so true it is that ne-

cessity is the parent of invention.

Intending to limit my observations to the mechanical part of the operation, I avoid treating of bleeding and opiates, as auxiliaries in facilitating it. For the same reason I do not point out more than by this slight reference, the advantages derivable from this method in cases of twins, and of prolapsus of the funis during labour; but my reader, if engaged in the practice of midwifery, will not be at a loss to make the application.

To exemplify my remark that the writers on midwifery, most generally and deservedly esteemed, direct a foot, or the

^{*} An ingenious friend, Dr. Douglas of this city, in an Essay on Spontaneous Evolution, maintains that it will universally occur. Vol. VII. 25

feet, to be sought for; though not first in chronological order, I shall begin with Dr. Denman, who, I think, must have occasionally operated in the manner I suggest. The following passage is to be found in the 2d volume of his Midwifery, page 245. "But in the longitudinal contraction, the feet being at a great distance, there is more difficulty, though it is not always necessary to go up to the fundus; for when we come to the knees, these being cautiously bent, the legs and feet will be brought down together." These directions are given as an exception to a general rule; for in the immediately preceding pages, 232, 237, 244, same volume, when laying down rules for the management of the most favourable, as well as the most difficult cases of arm and shoulder presentation, he distinctly and explicitly recommends the feet to be sought for. There can be little doubt, that, had not this judicious writer been biassed by the opinions of his predecessors, he would not thus slightly have passed over the advantages of turning by means of the knees.

It would lengthen this essay, but not tend to any useful purpose, to quote the directions given by Mauriceau, Smellie, Baudeloque, Hamilton, Burns, and Merriman, for turning the child. A reference to their works will prove, that each directs the feet to be sought for. There are delineations in plates of presentations of the superiour extremities, to which the method of turning I recommend does not appear applicable; these cases are either excessively rare, or, what I believe to be more likely, are the invention of authors in their closets.

Edin. Med. and Surg. Journal.

Mr. Bailey's Observations on the Use of Belladonna in Tic douboureux.

Mr. Bailey was led to the employment of Belladonna in neuralgic affections of the face, from having, in 1812, administered a five-grain dose of the extract to a lady, which was attended with darkness of vision, a benumbed state of the face, and various other alarming symptoms. He recommends the extract and tincture of the herb as prepared by Corbyn and Co. and details nearly thirty cases of neuralgia facialis, where it was more or less successful.

"Of the tincture, from twenty to forty minims may be given at a dose, in any mild vehicle, augmenting or diminishing it according to its effects, and repeating it with that frequency which the degree of uneasiness which it is intended to subdue requires. Of the extract, prepared agreeably to the directions of the London Pharmacopæia, I at first began with a single grain, and repeated it every four hours, until relief followed; but, upon a further and improved acquaintance, I found it more successful to commence with three times that quantity; and if a repetition were necessary, to give it in diminished doses

afterwards." p. 14.

For the reasons stated above, we shall not attempt to abbreviate any of the cases, nor condense the series of judicious comments by which they are accompanied, trusting, as we do, that this meritorious little volume will find its way wherever medical science is zealously cultivated. But we shall make a few remarks on the pathology of this cruel disease; and although our conclusions are somewhat at variance with those of our author, they do not, in any degree, affect the reputation of the remedy he proposes, nor materially clash with his general mode of treatment.

Mr. Bailey considers what has been termed tic douloureux as a local disease, and having "its origin in the diseased state of membranes lining the cavities of the molar teeth." In short, that the remote cause is a decayed state of the molares, and the immediate or proximate cause, "a diseased state of the extremities of the affected nerves." p. 25.—Now, although we readily admit that the sentient extremities of the nerves are often the seat of the disease, and that their derangement is occasioned by the irritation of carious teeth; yet we are far from thinking that this is always, or even generally the case. Mr. B. very justly observes, that neuralgia facialis and hemicrania commonly arise in persons of "irritable habit; for the most part between the 40th and 50th years, and are excited into action by exposure to a cold and humid atmosphere; by fatigue; by external violence; and by uneasiness of mind." Now these circumstances being held in view, we shall have much reason to connect the local effect with constitutional causes. Without dwelling on the derangement of function in the digestive organs, which the above circumstances are calculated to produce, and the local morbid sympathies which so frequently ensue; we may advert to a still more fertile source:viz. Rheumatic and gouty irritation. When we contemplate how much the climate and modes of life in this country predispose to, and excite the above-mentioned diseases; and when we recollect that the neurilema or envelope of the nervous cords is a structure or tissue which forms the favourite seat of gouty and rheumatic inflammation; and finally, when we bear in mind how much the head and face are exposed to all kinds

of atmospherical vicissitudes, we may readily conceive that

neuralgic affections must be extremely prevalent.

Nor does even the local treatment or cure of the disease offer any material objection to this view of the subject. Local effects often become, in some measure, independent of their general causes, and are cured by topical applications. By paralyzing the facial nerves, we have no doubt that tic doulou-reux may be cured; at the same time, we think that attention to the general health will be extremely useful, if not necessary, in guarding against relapse. Calomel, opium, and antimonial powder, a combination the most efficacious that has yet been discovered anterior to belladonna, by equalizing the balance of the circulation and excitability, and thus removing the local irritation, elucidate the principle we have now in view.

From attentive observation to the complaint under consideration, for some years past, we are convinced that tic douloureux is very frequently an arthritic affection, en masque. The violence and periodicity of its attacks, as well as many other

of its phenomena, corroborate this opinion.

But such are the obstinacy and intractability of the disease—such the inefficacy of the medicines hitherto employed—and such the misery of disappointment in treating so torturous a malady, that the medical profession will, we are sure, most gratefully receive Mr. Bailey's contribution to therapeutical science, and evince their gratitude by universal perusal of the work.—Medico-Chirurgical Journal.

Spurred Rye.

This article, the effects of which seem to us as undoubted, as those of most other agents in the Materia Medica, appears to be coming into use in Europe. A late number of the Continental Medical Repository states that it has been employed by several practitioners on the continent with unequivocal effect in quickening the uterine efforts and hastening the birth of the child.

Domestic.

MEDICAL DEGREES.

THE semi-annual public examination was held at Cambridge agreeably to the statutes of the University, after the termination of the winter course of lectures on the various branches of medicine. Six gentlemen, whose names follow, appeared and read dissertations on the subjects placed against their names respectively. These gentlemen were graduated doctors of medicine on the 12th of March, 1818.

Nath. Brewer, A. B. of Boston, on cynanche tonsillaris.
Alpheus S. Chandler, of Eliot, Maine, on dolichos pruriens.
Thomas W. Parsons, of Boston, on insensible perspiration.
Usher Parsons, M. M. S. S. of Alfred, Maine, on the epidemic pneumonia of 1812-13, as it appeared about lake Erie.

Charles Wild, A. M. of Boston, on delirium tremens.

Samuel W. Wyman, A. B. of Boston, on caries of the bones.

John Gorham, M. D. Professor of Chemistry in Harvard University, will shortly put to the press, a work, entitled, Elements of Chemical Science, in two volumes 8vo, with plates.

MASSACHUSETTS MEDICAL SOCIETY.

In accordance with a law of the commonwealth, enacted February 10, 1789, and in obedience to a bye-law of the Massachusetts Medical Society, the counsellors of the said society hereby give notice, that candidates for examination before the censors, must hereafter give evidence of having read and studied the books whose titles are contained in the list which follows, viz.;

The Edinburgh System of Anatomy.

Bell's Sytem of Anatomy, or Wistar's Anatomy.

Haller's First Lines of Physiology.

Richerand's Elements of Physiology.

Bichat on Life and Death.

Lavoisier's Elements of Chemistry.

Murray's System of Chemistry, or Henry's Chemistry.

Murray's Materia Medica.

Thacher's Dispensatory.

Pharmacopeia of the Massachusetts Medical Society.

Benj. Bell's System of Surgery.

Boyer's System of Surgery.

Boyer on the Bones.

Hunter's Treatise on the Blood, Inflammation, and Gunshot wounds.

Burn's Anatomy of the Gravid Uterus.

Deuman's System of Midwifery.

Deuman's Aphorisms.

Cullen's Nosology.

Cullen's First Lines of the Practice of Physic.

Thomas's Practice of Physic.

Sydenham's Works.

Rush's Works.

Underwood on the Diseases of Children.

G. Fordyce's Dissertations on Fever.

Heberden's Commentaries on Diseases.

Hunter's Treatise on Lues Venerea.

Although the books mentioned in the foregoing list are all that candidates are required to have read, yet the counsellors believe that many more may be perused during the period of pupilage, and they have therefore prepared another list of books, which they recommend for the perusal of students in medicine.

BOOKS RECOMMENDED.

Anatomy.

Winslow's Anatomy.

Soemmerring's do. Cheselden's do.

Boyer's do.

Albinus's Anatomical Plates.

Charles Bell's System of Dissections.

London Dissector.

Physiology.

Halleri Elementa Physiologiæ.

Boerhaave's Institutes.

Nouveaux Elemens de la Science de l'Homme par Barthez.

Bichat's General Anatomy.

Bichat on the Membranes.

Blumenbach's Physiology. Blumenbach's Comparative Anatomy. Cuvier's Comparative Anatomy. Fordyce on Digestion. Hunter on the Animal Economy.

Hewson on the Blood and Lymphatics. Sheldon on the Absorbent System.

Bostock on Respiration.

Ellis on the Effects of Germination, Vegetation and Respiration on the Air; in two parts.

Parry on the Pulse of the Arteries.

Chemistry.

Davy's Elements of Chemical Philosophy. Thompson's System of Chemistry.

Black's Chemistry.

Accum's do.

Materia Medica and Pharmacy.

Murray's Apparatus Medicaminum.

Thesaurus' Medicaminum.

Cullen's Materia Medica.

Lewis's

Pearson's do.

Bigelow's Medical Botany.

Surgery.

Pearson's Principles of Surgery. Bell's (J.) do.

Thomson on Inflammation.

Pott's Works.

Abernethy's Surgical Works.

Dorsey's Surgery.

Cooper's Surgical Dictionary, by Dorsey

Hey's Practical Observations on Surgery.

Bell's (Ch.) Operative Surgery.

Desault's Surgery.

Richter's Medical Cases in Surgery.

Larrey's Military Surgery.

Jones on Hæmorrhage.

Home on the Formation of Pus.

Bell (B.) on Ulcers.

on Lues Venerea.

Ware on the Diseases of the Eye.

Scarpa on the Eye. Wardrop on the Morbid Anatomy of the Eye. Saunders on the Eye. ——on the Ear. Hunter on the Teeth. Fox on the Teeth. Cooper (A.) on Hernia. Lawrence on Travers on Wounds of the Intestines. Crowther on White Swellings. Ford on the Hip-joint. Home on the Strictures of the Urethra. Bell (C.) on Diseases of the Urethra. Howship on Diseases of the Urinary Organs. Copeland on Stricture of the Rectum.

Midwifery.

Smellie's Midwifery. Hamilton's Boudeloque's do. Merriman on Difficult Parturition. Rigby on Uterine Hæmorrhage. Burns on do. White on Lying-in Women. Gordon on Puerperal Fever. Hey on do. Armstrong on do. do.

Pathology and Therapeutics.

Celsi Opera. Gaubii Institutiones Pathologicæ. Van Swieten's Commentaries on Boerhaave. Conspectus Medicinæ Theoreticæ, auctore Jacobo Gregory. Burserius's Institutes of Medicine. Nosologia Methodica, auctore F. B. de Sauvages. Brown's Elements of Medicine. Darwin's Zoonomia. Brown on Darwin's Zoonomia. Parry's Elements of Therapeutics, &c. Morgagni on the Seats and Causes of Diseases. Ballie's Morbid Anatomy—with the plates. Whytt's Works. Forthergill's Works. Cheyne's Essays on Diseases of Children.

Percival's Medical Works.

Currie on the Diseases of America.
Kirkland's Medical Surgery.

Zimmerman on Experience in Physic.

Huxham on Fevers and Sore Throat.

R. Jackson on Fevers of Jamaica.
R. Jackson's Outlines of the History and Cure of Fevers.

R. Jackson on Cold Water.

Currie on Cold Water.

Philips (alias Wilson) on Febrile Diseases.

Senac on Intermittent Fever.

Alibert on Intermittent Fever.

Clark on Fevers and Scarlatina.

Chisholm on Pestilential Fevers.

Bancroft on Yellow Fever, &c.

Fellowes on the Fever of Andalusia, &c.
Armstrong's Illustrations of Typhus, &c.

Beddoes on the Combination of Fever and Inflammation.

Strong on Petechial Fever.

North on Petechial Fever.

Gallup on the Epidemics of Vermont.

Clark on Hot Climates.

Lind on Hot Climates.

Johnson on Diseases of Hot Climates.

Chalmers on Diseases of South Carolina.

Cleghorn on Diseases of Minorca.
Hillary on Diseases of Barbadoes.

Hunter on Diseases of the Army in Jamaica.

Mosely on Tropical Diseases.

Pringle on Diseases of the Army.

R. Jackson on the Medical Department of Armies.

Lind on Diseases of Sommer.

Lind on Diseases of Seamen.

Lind on the Scurvy.

Blare on Diseases of Seamen.

Trotter's Medicina Nautica.

Blackall on Dropsies

Blackall on Dropsies.

Portal sur l'Apoplexie.
Cheyne on Apoplexy, Lethargy, &c.

Arnold on Insanity.

Crichton on Mental Derangement.

Pinel on Insanity.

Haslam on Madness.

Cox on Insanity.

Rush on Mental Diseases.

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Bree on Disordered Respiration. Corvisart on Diseases of the Heart. Burns on Diseases of the Heart. Parry on Syncope Anginosa. Davis on Carditis. Maclean on Hydrothorax. Young on Consumption. Stark's (Wm.) Works. Hamilton on Digitalis.
Withering on Foxglove.
Crumpe on Opium.
Badham on Bronchitis. Watts on Chincough.
Fothergill on Ulcerated Sore Throat. Withering on Scarlatina. Ring on Gout. Sutton on Delirium Tremeus, Peritonitis and Gout. Pemberton on Diseases of the Abdominal Viscera. Saunders on the Liver. Harty on Dysentery.
Hamilton on Purgative Medicines. Brera on Worms; by Coffin.

Adams on Morbid Poisons.

Bateman on Cutaneous Diseases, with the plates. Willan on Cowpox.
Home's Medical Facts. ——— Clinical Experiments. Ferriar's Medical Histories and Reflections. Fowler on Rheumatism. ---- on Arsenic. on Tobacco. Robertson on Cantharides. Bardsley's Medical Reports.

Haygarth on Rheumatism.

Rollo on Diabetes.

Miscellaneous and Periodical Works.
Friend's History of Medicine.
Hunter's Introductory Lectures.
Cabanis on the Revolutions in Medical Science.
Hutchinson's Biographia Medica.
Young's Medical Literature.
Gregory on the Duties and Qualifications of a Physician-Rush's Introductory Lectures.
Percival's Medical Ethics.

Farr's Medical Jurisprudence. Edinburgh Medical Essays.

Medical Observations and Inquiries.

Medical Transactions of the College of Physicians of London.
Transactions of the College of Physicians of Philadelphia.

Memoirs of the Medical Society of London.

_____ of the Massachusetts Medical Society.

Duncan's Medical Commentaries.

Transactions of a Society for the Improvement of Medical and Chirurgical Transactions.

Medico-Chirurgical Transactions.

London Medical and Physical Journal.

Edinburgh Medical and Surgical do.

New York Medical Repository.

New York Medical and Philosophical Journal.

New England Journal of Medicine and Surgery.

The qualifications of candidates for examination are stated in Chapter IV. Section II. of the bye-laws of the Society. That section is here copied in order to give to it greater publicity.

"Every person, educated within this Commonwealth, shall have the following qualifications to entitle him to an examination by the Censors of the Society, or by those of any district

Society.

"1st. He shall have such an acquaintance with the Greek and Latin languages, as is necessary for a medical or surgical education, and with the principles of geometry and experimen-

tal philosophy.

"2d. He shall have studied three full years under the direction, and attended the practice, of some one or more of the Fellows or Honorary Members of the Society; during which time, he shall have studied the most approved authors in anatomy, chemistry, materia-medica, surgery, midwifery, and the theory and practice of medicine; or, at least, all those which the Counsellors shall from time to time specify, as constituting a proper course of medical or surgical education.

"Any person, educated without this Commonwealth, may be admitted to an examination, either by the Censors of the Society, or by those of any district Society, if he possess the qualification specified in the first of the articles above mentioned; and instead of those required in the second, shall have studied three full years under the direction, and attended the practice of some reputable physician or physicians, surgeon or surgeons,

as the case may be.

"The Censors of the Society, and those of the several districts, before examining any candidate, shall demand and receive from him a satisfactory certificate of his being qualified in one or the other of the modes before mentioned, and such certificate shall be delivered by the Censors to the Recording Secretary, or to the Secretary of the district Society, as the case may be, whose duty it shall be to put it on file, and make a record thereof."

Published by Order,

JOHN DIXWELL, Recording Secretary.

April 1, 1818.

Extract from the Transactions of the Medical Society of the

State of New York, for the year 1818.

Whereas a uniform system of preparing, and compounding medicines, throughout the United States, would contribute much to the satisfaction of the practitioner, and obviate many existing sources of embarrassment and danger; And whereas much diversity does now prevail in pharmaceutical preparations in the different sections and states of the Union, in consequence of the various Pharmacopæias which are adopted—such as Coxe's Dispensatory, the Massachusetts Medical Society's Pharmacopæia, Thacher's Dispensatory, the New York Hospital Pharmacopæia, the Edinburgh Dispensatory, the London Dispensatory, the London Pharmacopæia, the Dublin Pharmacopœia, the Parisian Pharmacopæia, &c.—which accounts for a well-known fact, that the traveller finds a different preparation, under the same name, in almost every village, town, or city, in which he may chance to be indisposed; for so multifarious are the names of medicines, that a name which is common in one town may be unknown in another, or, what is worse, be applied to a very different medicine. Therefore,

Resolved, That it is expedient that a Pharmacopæia should

be formed for the use of the United States.

Resolved, That the several incorporated state medical societies, the several incorporated colleges of physicians and surgeons, or medical schools, and such medical schools as constitute a faculty in any incorporated university or college in the United States, be respectfully invited to unite in the formation of the American Pharmacopæia; and in case there should be any state or territory in the Union, in which there is no incorporated medical society, medical college, or school, that voluntary associations of physicians and surgeons, in such state or territory, be respectfully invited to unite in this undertaking.

Resolved, That to form an American Pharmacopæia, it is expedient to divide the United States and territories into four districts, viz. the northern, middle, southern, and western.

Resolved, That a convention be called in each of these

districts.

Resolved, That each state medical society, college of physicians and surgeons, medical school, faculty of medicine, and voluntary association, as before described, be invited to appoint one or more delegates to meet in a distinct convention.

Resolved, That each district convention form a Pharmacopoeia, or select one in general use, and make therein such alterations and additions as shall adapt it to the present state of

medical science.

Resolved, That each district convention be requested to appoint one or more delegates, to meet in a general convention, and submit to the same their Pharmacopæias.

Resolved, That it be recommended to each medical society, &c. to defray the expenses of its own delegation, and its pro-

portion of the expenses of the district convention.

Resolved, That the general convention be held in the city of Washington on the first day of January, A. D. 1820, for the purpose of compiling the American Pharmacopæia from those Pharmacopæias which may be represented by the district conventions.

Resolved, That the general convention adopt a plan for revising the American Pharmacopæia at the end of every ten years, and that no alteration be made therein except at those periods, and then only by the authority aforesaid.

Resolved, That it be recommended to every medical society, &c. to adopt the American Pharmacopæia, and encourage

the use of it by all druggists and apothecaries.

Resolved, That the general convention sell, for ten years,

the copy right of the American Pharmacopæia.

Resolved, That the general convention defray their expenses out of the proceeds of the sale, and divide the surplus equally among all the societies, &c. which were represented in the district conventions.

Resolved, That this Society do now appoint David Hosack, M. D.; J. R. B. Rodgers, M. D.; Samuel L. Mitchell, M. D.; John Stearns, M. D.; John Watts, Jun. M. D.; T. Romeyn Beck, M. D.; Lyman Spalding, M. D.; Wright Post, M. D.; and Alexander H. Stevens, M. D.; delegates to meet in district convention, for the purpose of forming a Pharmacopæia.

Resolved, That the delegates appointed by this Society be a special committee to correspond with all the incorporated state

medical societies, &c. in the Union, and such influential medi-

cal men as they may deem proper.

Resolved, That if a majority of the incorporated state medical societies, incorporated medical colleges, medical schools, and faculties of medicine, in the United States, approve of the formation of an American Pharmacopæia, that it be undertaken.

Resolved, That when it shall be ascertained that a majority of the societies, &c. approve of the formation of a Pharmacopeia, the special committee of correspondence of the New York State Medical Society, shall give public notice, as well as notice to all incorporated state medical societies, &c. that

an American Pharmacopæia will be formed.

Resolved, That in order to fix on times and places for holding the several district conventions, the special committee of correspondence be directed to request the several societies, &c. to name what time and place, in their opinion, would be most convenient for the meeting of the convention in their district; and when the formation of a Pharmacopæia is agreed on, that the aforesaid committee transmit to each society, &c. the names of the several places in their district, and the times which have been mentioned, and point out what time and place have the most votes, and submit to the several societies, &c. if such time and place would be most convenient.

Resolved, That this Society would propose the first day of June, A. D. 1819, and the city of Philadelphia, as a convenient time and place, for the meeting of the convention, in the

district known by the name of the Middle States.

Uterine debility cured with Polygala Senega.

Mrs. Hoag, aged twenty-four, was married about five years since, and at that time enjoyed a perfect state of health; and since that time has miscarried once annually, (or four times) and was each time so reduced that her life was despaired of in consequence of uterine hæmorrhage, the last time of which left her in a debilitated state, and more particularly that of the uterine system, there being no catamenial discharge; but a profuse leucorrheal discharge, a pain in the hypogastric region, habitual constipation of the bowels, a pale, sallow, cadavecous countenance and marasmus, and a train of other dyspeptic symptoms constantly attended; for which she resorted to a great number of gentlemen of the medical faculty without any benefit whatever, but evidently to her disadvantage, all

tending to confirm the opinion of her friends and self, that her disease must unfortunately be ranked amongst the incurables. This being the history she gave me at the time I saw her, and such an one as at first view induced me to withhold any encouragement of her ever enjoying a good state of health. But not being satisfied until an effort of my own should decide my opinion, I accordingly took into consideration the state of her system more particularly, and believing her case to be that of uterine debility, and that the other symptoms were altogether secondary, my first indication therefore was to remove uterine debility, and being well satisfied of the efficacy of polygala senega in similar cases, from repeated trials, I was induced to give it a trial in the present case, which unexpectedly succeeded. The time and manner in which the medicine was exhibited are as follows; -The first exhibition of the medicine was about fifteen months since, took of the infusion rendered agreeable by the addition of caryophyllatar and cort. cinnamon, together with one quarter the quantity of Jamaica spirits to prevent its acidifying, of which she took four ounces per day for the term of six months, together with laxatives as occasion required, which was but a short time after the commencement of the above infusion, at which time she became pregnant, and has enjoyed a good state of uterine gestation. Was bled once about the seventh month, and the very day in which she expected to be confined, was delivered of two healthy children of more than common size of twins.

D. M. BROWNELL.

Berne, Albany County, New York, August 25, 1817.

DEATH OF DR. WISTAR.

THE community of men of science in this country, have experienced a great loss in the death of Dr. Wistar, Professor of Anatomy in the University of Pennsylvania. While engaged in his course of lectures, he was attacked by a pulmonary disease, which proved fatal in a few days. His death

occurred on the 22nd January, 1818.

Dr. Caspar Wistar was born in Philadelphia in the year 1761; received his school education and pursued the course of his medical pupilage in that city. In the year 1783, he went to Europe and remained there three years. Soon after his return, he was made Professor of Chemistry in the college of Philadelphia; but that office having ceased to exist by a union of the college with the university of Pennsylvania, to

which union he contributed, Dr. Wistar was received by Dr. Shippen, Professor of Anatomy, as his colleague; and on the death of the latter, about ten years since, became sole Professor of Anatomy. He held also a distinguished office in the American Philosophical Society, and was conspicuous in other associations for the promotion of scientific and benevolent objects. He was for some time an active and acceptable practitioner of medicine and surgery; but from a distaste for the practice of the latter, he long since abandoned it, and more recently was compelled by ill health, to relinquish the practice of medicine.

The ability with which nature endowed this gentleman, was cultivated with so much assiduity and success, that he became distinguished for his acquaintance with natural science, and eminent for his powers as a public lecturer. Nor was he unknown as an author. The transactions of the American Philosophical Society contain evidences of his ability as a writer on natural history; and his system of anatomy exhibits him most favourably as a man of sound learning and discriminating mind.—His moral qualities were of a most honourable character. His heart was full of benevolence, which expanded to all who approached him. This kindness of feeling softened his manners into an address, so attractive, that without appearing to seek it, he gained the affection of all who knew him. friends sought him with eagerness, because they were sure of being received with cordiality: and thus he was enabled to assemble around him a periodical party of the most distinguished men of learning, both citizens and strangers.

Without hazarding that style of panegyric, which would be insulting to the retiring character of Dr. Wistar, we can justly attribute to him the reputation of being a modest, learned and good man, who was an ornament to his city and an honour to

his country.

TO CORRESPONDENTS.

We are again obliged to postpone to another number, several original communications, some of which have been long on hand.

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JULY, 1818.

No. III

Cases of Gunshot wounds through the Thorax, with remarks. By Usher Parsons, M. D. M. M. S., Surgeon in the United States Navy.

[Communicated to the Editors of the New England Journal.]

CASE FIRST.

ENJAMIN BAILY, a robust seaman, aged about thirtyseven, was wounded by a canister shot, which entered the chest about one inch from the sternum, passed through the right lung, and out, between the fifth and six ribs, both of which it fractured near their angle. For twelve hours the hæmorrhage was profuse, causing frequent fainting, and was thought to have removed him beyond the reach of medical Consequently his wound was not dressed, nor was his position, which was horizontal, changed, for the first twentyfour hours. With the aid of cordials, he had by this time so far revived, as to be able to speak, and to move his limbs. The wound being now examined, small quantities of frothy blood were found to gush out at every expiration, accompanied with a rushing of air. After removing some pieces of bone from within the wound, and applying light dressings, he was again laid in a horizontal position. These dressings were removed three times in the twenty-four hours, and at each time, the discharge from the wound had been sufficient, to pass through several layers of linen, pledgets of tow, and a blanket. The quantity however gradually diminished, and in two or three days became somewhat serous and very fetid. No febrile symptoms appearing, he was now put upon a nu-

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tritious diet, with the free use of port wine; and in the course of a week he was able to sit up to have his wound dressed; and the discharge from it had so far diminished, as to require only two dressings a day. In a fortnight he was able to sit up nearly all day; the matter had become somewhat purulent, and still more diminished in quantity. About this time, some pieces of bone were discharged, after which his general health improved very rapidly. A probe could now be introduced into the chest, and played round in any direction, which plainly indicated a destruction of the lung. The wound being kept open with tents, pus, in small quantities, continued to pass. out from the chest till April; five months after the injury was received; when it gradually diminished, and the wound was suffered to close. His general health appeared perfectly restored, except that exposure to sudden transitions of atmospheric temperature, would disorder the respiratory organs much sooner than formerly; and a shortness of breath was more readily induced by exercise. Sometime late in July following, this patient complained of a sense of weight in the chest, oppressed respiration, frequent rigors, and shortly after an inability to lie on the left or uninjured side. His distress increased, and in a week or two, he was unable to lie on either side, or back, or to stand erect; and for the most part rested on his hands and knees. His face was flushed and bloated, pulse very irregular, and there was a remarkable throbbing of the temples. He complained of thirst, total loss of appetite. head-ach, difficulty of breathing, and great restlessness. On examining the chest by percussion, neither the sound, nor sensation to the fingers, resembled what is produced by a healthy chest. In short, every circumstance indicated a collection of pus; and it was determined to give it vent by paracentesis. While preparing for the operation, I for the first time discovered a tumor, rising on the back, a little to the right of the last dorsal vertebra. Suspecting that pus was about to force itself through this part; I endeavoured to make the skin and integuments yield before it, by the application of emolient cataplasms, by which the tumor in a day or two attained to a much larger size, and became somewhat pointed. An abscess lancet, being now plunged into it, gave vent to between two and three pounds of pus; and immediate relief was the consequence. He however complained of faintness, which led me to stop the discharge for that day, by closing the wound and applying a compress. For two or three days in succession, the discharge of pus was again very copious, after

which it gradually diminished. He convalesced so rapidly, that in a fortnight he was able to do partial duty, and four weeks after his chest was evacuated, he was perfectly sound, and as active as any sailor at the battle of Lake Erie, and has remained healthy ever since. It should ere this have been observed, that no foreign substance was discovered among the pus, that could have caused its collection.

CASE SECOND.

Capt. Charles Gordon, United States Navy, aged about forty, of slender frame and feeble health, was wounded through the right lung. For the history of this case, from its commencement, till towards its termination, I am indebted to Dr. Gibson of Baltimore, who was consulted in the case in 1811. the year after the wound was received, at which time he obtained the following account from the physician, who had formerly attended. "In January 1810," (says Dr. Worthington to Dr. Gibson.) "I was called to visit captain Gordon, who had been wounded a few days before in a duel. Upon examination, I found that the ball had entered the chest at the end of the seventh rib, near its junction with the cartilage; and passing under the arch of the rib some distance, had made its way out through the muscles, and ranging along over the vertebra lodged just below the inferior angle of the left scapula; where it was covered only by the skin, and was readily extracted. The ball in its passage appeared to have wounded the lung, and fractured the rib near its articulation with the vertebra. Immediately upon receiving the wound, a sudden and copious gush of blood-took place, which had nearly proved fatal; but the bleeding soon ceased, and the patient was able to bear the motion of being conveyed to his lodgings. When I first saw Captain Gordon, (continues Dr. Worthington,) he was extremely feeble and exhausted, had oppressed breathing and fever; suppuration had commenced, and he was confined to his back. It was thought advisable, in order to prevent a lodgement of matter, to keep the posterior wound open, and our attention was accordingly directed to this object. But it soon healed, and no other vent was left for the matter but the original opening, at which the ball entered. This, as was foreseen, produced great inconvenience. The suppuration soon became very great, and captain Gordon's weak state not admitting much motion, the matter had no opportunity of being discharged except morning and evening, when he was turned over to be dressed. The consequence of its being retained, was absorption and hectic fever, which reduced him so very low, that it was thought for many weeks, he would sink under it. He was however supported by light nourishing diet, antiseptics, and tonics, until he was able to sit up, and finally to be removed from the city. Previously to captain Gordon's being wounded he was in delicate health, had been subject to cough, and was threatened with a pulmonary affection. After the large discharge of blood from the wound the cough ceased; (the bleeding appearing to have removed the cause of it, and, as he had no bloody expectoration, a belief was entertained for a time, that the lungs were not wounded. But the forcible discharge of air from the orifice at every expiration, whenever the dressings were removed, especially after the suppuration became copious, convinced us, that not only the lungs were wounded, but had extensively suppurated. The orifice having a disposition to heal, it was necessary to dilate it, and keep it open by a sponge tent; and once it was laid open to the extent of an inch or two, to give a more free vent to matter." Dr. Worthington adds, that, upon examination of the chest, he discovered, at the place the ball had entered, a fistulous orifice, of sufficient size to admit a large writing quill. From this opening was discharged about half a tea-cup full of purulent matter, and along with this a considerable quantity of air. By introducing the long gunshot probe, he was convinced, that the wounded lung had collapsed, and that the right side of the chest was entirely empty. A tent was constantly kept in the orifice of the wound, which it was requisite to remove three or four times a day, to discharge the matter as it was collected. discharge gradually decreased, and captain Gordon's health improved to a great degree.

I became acquainted with the case in the summer of 1816, about six years after the injury, and then learned from the patient, that both wounds had several times closed, and that one or the other had as often been forced open by collections of pus within. To prevent a recurrence of this, he had long worn in one of the wounds a silver tube, corked, through which the pus was evacuated daily in the quantity of about one ounce. When suffered to collect in larger quantities, a recumbent posture, with the head and shoulders depressed, caused a discharge of it into the mouth. At every respiration, air rushed in and out at the wound, so that he could blow out a candle held near it, as readily as with his mouth. A probe

introduced into the orifice in the back, could be played round in any direction; and when it was bent to a right angle, two inches from the extremity, this length just measured the dis-

tance from the orifice to the diaphragm.

His constitution continued slender,—voice feeble and shrill, and his body much emaciated; but his appetite was voracious, and his digestion good. While in this state, he was most of the time employed in active service, and had long been in the command of the Constellation, in which he died, in the Mediterranean, in September, 1816. His health remained nearly the same till within three months of his death, when his digestion became disordered, first by costiveness which terminated in diarrhæa, and soon after loss of appetite ensued, which continued, till complete exhaustion ended his existence.

APPEARANCES ON DISSECTION.

The body was examined by Drs. Washington, Ray, Peachy and myself. On raising the sternum, sterno-costal cartilages, and pleura, we found no portion of the right lung remaining, nor any substance occupying its place except some knobs of granulations on the mediastinum, with similar ones surrounding the two orifices made by the ball, and about two ounces of pus on the diaphragm. A splinter of one of the fractured ribs projected about half an inch from the wound in the back, into the chest, and several small fragments of bone were lodged on the diaphragm, to one of which adhered a particle of the fatal ball, half as large as a pea. These lay near the ribs immediately under the wound, and appeared to have irritated the parts, inducing ulceration, and the growth of fungus.

The capacity of this side of the thorax was very much diminished, partly by the approximation of the mediastinum to the ribs, but more by the pushing up of the diaphragm. The abdominal viscera, pressing this against the pleura costalis posteriorly, had caused it to adhere to within about two inches of the wound in the back. The bronchial passage, opening into the vacant side of the chest, was of such a size, as to admit the passing of a large quill up into the mouth.

The other lung was small, and had formed partial adhesions to the pleura costalis; probably in consequence of a pleurisy, with which he had suffered the preceding winter. The heart was extremely small, but otherwise of a natural appearance.

The abdominal viscera exhibited no marks of disease, except that the liver was preternaturally large.

Remarks on the foregoing cases.

The principal object of these remarks is, to show, that the operation of paracentesis of the thorax might have been servicable in both cases.

Surgeons have not only agreed as to the state of the patient requiring paracentesis, but have united in their choice of the exact point of the thorax, in which the perforation is to be made; fixing the "point of election," as they term it, between the sixth and seventh true ribs, half way between the spine and sternum. When however an opening already exists, as in the foregoing cases, it has rarely been recommended to make another. Surgeons have preferred evacuating the pus once or twice a day, by inclining the body, so as to favour its discharge from the chest through the old wound, although a more depending opening might give free egress to matter as fast as it is formed. Now the advantage of such an opening, in Baily's case, would have been, its not closing prematurely, as the wound did. The constant running would have kept it open, till all was sound within, and thus the train of evils, which the accumulated pus occasioned, in forcing its way through the back, would have been prevented. Evils incomparably greater, than could have arisen from so simple an operation, and which will always be the effect of a premature closure of the wound. But if the wound be high up it will be difficult to prevent its closing, and even if it be kept open artificially, the pus cannot easily be discharged through it, but will accumulate in the cavity of the chest, and finally seek a new outlet in the most depending part, as it did in Baily's case. The result of this case proves that such an opening would have been beneficial, for so soon as a depending outlet was established, the cure was made complete. And is there any objection to such an operation at an early stage of the difficulty? None has occurred to my mind, but on the contrary it seems to me expedient and may often be the means of saving much suffering and even the life of the patient.

In Gordon's case what was there to prevent its terminating in a complete cure, provided a counter opening had been made as early as in Baily's case? The ball was not one quarter as large, and consequently the injury far less. The great difficulty, however, in Gordon's case over the other, seems to have been the lodgement of foreign substances, bone and lead,

within the cavity of the chest. These substances lay on the diaphragm against the ribs; and their irritation had occasioned ulceration, and constant secretion of pus, so that nearly all, which was daily drawn from the wound, was furnished from this source; and it is doubtful, whether a counter opening would have diminished its quantity, or in hardly any degree been serviceable, while those irritating substances remained. The operation however might have removed these substances, and for this reason, it should have been performed, if their presence had been suspected. The examination of the body after death perfectly satisfied me, that a counter opening would have enabled the surgeon to remove these foreign substances with the greatest ease; while it seemed impossible to have done it through the old wound.

I know it has been said by Larrey, that, after the age of thirty five, the operation for empyema, with a wounded lung, will not effect a complete cure. "That it succeeds to this degree only in early life, when the power of the system to restore parts is greatest; and that then a cure is effected by a partial approximation of the walls of the thorax, and the production of new flesh, which will, in process of time, fill up the cavity, formerly occupied by the lung, with a cicatrix." Gordon's age, then, according to Larrey, would have prevented a cure. But Baily's case is certainly an exception to this opinion. He was thirty seven years of age; nor was the cure effected in the above manner; for it is impossible, that a cavity occupied by from four to six pounds of pus, could have been filled up by solid granulations, in the space of the month, in which his cure was effected. There must have remained a cavity, sound, and healthy after the wound was closed; and it is easy to conceive, that Gordon's case might have terminated in the same favourable manner, if an operation, at an early period, had placed it on the same ground; his age notwithstanding.

Larrey seems to have considered the importance of a depending outlet, when he made it in one instance between the third and fourth ribs, counting from below upward, which is a much lower point than has been recommended. I however cannot but think, that when an opening already exists high up, the point for operating may be better determined, by measuring the depth of the chest below this opening, by a probe bent and introduced into the cavity. In favour of this it is to be observed, that, in some cases, and particularly in Gordon's, the diaphragm forms adhesions to the ribs, above the

place of its former attachment; and in such cases a perforation, so low down as Larrey made, might penetrate the abdomen.

Mr. John Bell is the only author, who says much about searching for foreign substances within the chest, and, in cases like Gordon's, this author would direct the cavity to be syringed with warm water, in order to float the substances to the wound. He, however, probably means that pieces of cloth, might be washed out in this manner and not bone and lead; for he says, that, when a ball is lodged on the diaphragm, and empyema is formed, the incision, which lets out the matter, will also allow the ball to drop; and yet this author directs, that paracentesis should be performed at the point of election only, which is not the most depending, and therefore, not the most favourable for the ball to fall through.

The propriety of making a depending outlet in Gordon's case is not a new suggestion. It was recommended to him by one or two eminent surgeons, particularly by Dr. Gibson of Baltimore. What has been said with regard to the appearances on dissection, will in some degree satisfy those gentle-

men, of the correctness of their opinion.

In concluding this communication, it may not be improper to notice a remark of Dr. Worthington, on the subject of captain Gordon's health, previous to his being wounded, viz. that he had been subject to cough, and was threatened with a pulmonary affection, all which the bleeding from the wound appeared to remove. A similar instance is related to me by Dr. Wheaton of Providence, in a case where a musket ball passed through the right lung of a young man labouring under phthisis pulmonalis. The hæmorrhage was very profuse, but was followed by a speedy recovery, both from the wound and phthisical affection. Quere. Do not these facts speak in favour of copious bleeding as a remedy for consumption, as recommended by Dr. Gallup, and some other physicians of the present day?

An answer to Dr. Spalding's letter on Ergot. By John STEARNS M. D.

[Communicated for the New England Journal of Medicine, &c.]

FTER I had announced to the public the medicinal virtues of the Ergot in 1807, I had determined to make no further communications upon that subject. This resolution I should not have departed from, had not the last number of the Journal contained a letter from Dr. Lyman Spalding, which has connected with my name, erroneous ideas of the Ergot. I therefore conceive it to be my duty to obviate the objections which the Dr. makes to the use of this article.-Should any severity of remark occur in this reply, I trust the Doctor will acquit me of the most remote design to wound his sensibility, when I assure him, that I am influenced only by an earnest desire to elicit trnth. I have long hesitated whether I had rendered any service to the profession or to the public by the publication alluded to-these doubts were founded upon the abuse to which this article might be converted, by rash and inexperienced practitioners-It is therefore with much painful emotion that I have read cases in this Journal, in which physicians declare that "the Ergot kills the children." A due observance of the cautious rules which have at different times been recommended by writers upon this subject-would have prevented such disastrous effects. But such are the evils which accompany the first introduction of all powerful medicines into practice, and it is only by dear bought experience that such errors will be ultimately corrected.

The anxious desire of many practitioners to accelerate parturition, frequently induces the premature exhibition of the Ergot, and consequently the aggravated distress of the suffering patient. But if the letter of Dr. Spalding be entitled to full credit, we have nothing to apprehend from a medicine which he alleges to be equally inert with coffee. This fact was ascertained in his first experiment. Intent only upon "acquiring fame as an accoucheur" he disregarded the directions, which might have ensured success, hazarded the life of his patients, and exhibited his Ergot by ounces and pounds, "till his whole stock in trade was exhausted."

I shudder when I reflect on what might have been the situation of Dr. Spalding. A distressed patient precipitated into eternity, under circumstances the most appalling, the most afflicting to a feeling mind; but fortunately no extraordinary effect was produced, and the Dr. consequently concluded that his medicine was destitute of efficacy. I ardently hope that this opinion may not be hastily adopted by others; and should I succeed in preventing the repetition of experiments equally hazardous, my object will be attained, and the dictates of conscience obeyed. But this opinion is equally at variance with

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the experience of this country and of Europe; while some have denounced the ergot as highly deleterious, as productive of spotted fever, dry gangrene, &c. &c. others have condemned it for accelerating parturient pains too rapidly, and inducing an action in the uterus too powerful and incessant, but it was reserved for Dr. Spalding to discover, that both of these objections rested upon no better foundation, than an article totally inert and useless. The truth is, all these theorizing speculations are founded in error, the ergot is not inert, but one of the most active and useful articles of the materia medica, when administered under circumstances favourable to its operation—then and only then is it a valuable medicine, at any other time it is worse than inert, it is dangerous.

These circumstances are well known to every experienced practitioner, who has prudently regulated its use by the directions which have been reiterated to the public. When this knowledge is once perfectly acquired the observing accoucheur will generally predict the precise mode and period of its operation, but not "with watch in hand and mystic look" will he be obliged previously to excite the imagination, to render his medicine effectual. Not less than the Dr. have I always "abhorred mystery in medicine," my experiments, therefore, could not have been the result of deception or aided by a raised imagination, as nothing very extraordinary was ever promised by me, or expected by the patient from the use of the medicine. The peculiarity of the pains which immediately ensue, is so perfectly distinct from the usual pains of ordinary labour, that no one can for a moment hesitate to ascribe them to the ergot.

But I conceive it to be unnecessary to go into detail to prove the efficacy of a medicine which most practitioners have already satisfactorily tested by experience. I cannot, however, close this communication, without inviting the attention of the profession to a few plain and important rules, to restrict its rash prescription, and to prevent its premature ex-

hibition.

1st. It should never be administered where nature is competent to the delivery.

2d. It should never be administered until the regular pains have ceased, or are ineffectual, and there is danger to be

apprehended from the delay.

3d. It should never be administered where there is much rigidity in the Os Tincae. In such cases copious bleeding should be premised and a relaxation produced.

4th. It should never be administered in the incipient stages of labour, nor until the os uteri is dilated at least to the size of a dollar.

5th. It should never be administered in any preternatural

presentation which will require the Foetus to be turned.

6th. It should never be administered in larger quantities to any one patient, than thirty grains by decoction, to be repeated in doses of from five to ten grains; for strange as it may appear, the success does not always depend on the quantity. In doses of one or two grains combined with a little opium, it may be given so as to induce the interrupted pains of regular labour.

If these directions are rigidly observed, but few cases will occur which will render the use of the ergot necessary, and we shall hear no more lamentable stories of "its killing the

JOHN STEARNS.

Albany, June 16th, 1818.

Fatal effects of a poisonous root. In a letter to Dr. Bige-LOW. By RICHARD HAZELTINE, M.D.

Dear Sir, N Friday the 17th of last month, between two and three o'clock P. M. I was called to see a boy aged four years, in the last struggles of expiring life, from having eaten and swallowed some of a root, of which I send you a sample.— The history of the circumstances of the case, as accurately as I could obtain them, was as follows. Between nine and ten o'clock A. M. of that day, two or three of the children of the family, were observed to be eating certain roots which they had found in a ploughed field near the house; and which they supposed to be ground-nuts, artichokes, or something that was innoxious. The boy first complained that he had pain in his bowels; and felt as if he had a call to a dejection; and was directed to go to stool; but very soon returned and said he could do nothing. In a few seconds he puked, and brought up, as an intelligent woman, who was present and saw it, told me, a teacup full of what she at the time, without hesitation, considered, and still believes, to be the recently masticated root. Upon questioning her particularly upon this point, she told me that the first impression made upon her mind after seeing the boy puke, was, that the vomiting was

occasioned by the root which he had eaten. Immediately after puking, he fell backwards in convulsions; which, with various remissions and exacerbations, continued till he died. A physician was directly called, who, believing the convulsions to be owing to the poisonous quality of the root which he had eaten, endeavoured to excite vomiting, by administering what I supposed to be a solution of tartrite of antimony in water. I was told that the physician took his leave about one o'clock; having been unable to excite vomiting; and expressing an opinion, that the boy would continue but a few moments. I found the boy in a profuse sweat; and in constant convulsions. The convulsive agitations consisted of tremors; violent contractions and distortions, with alternate and imperfect relaxations of the whole muscular system; astonishing mobility of the eye-balls and eye-lashes, with widely dilated pupils; stridor dentium; trismus; frothing at the mouth and nose, mixed with blood: and occasionally, violent and genuine epilepsy; of which, he had two paroxysms after I arrived; which was only about half an hour before he expired. The convulsive agitations were so powerful and incessant, that I could not examine his pulse with sufficient constancy to ascertain its character. Very soon after dissolution, and sometime before the natural warmth had become extinct; the limbs became remarkably rigid. With a view to empty the stomach, I attempted to get down Pulv. Ipecac. in warm water, in which, although I succeeded tolerably well, yet, I could not possibly excite vomiting, even with the addition of frequent and active titillation of the internal fauces with a goose-quill.

The next day [Saturday] at four o'clock P. M. rather more than twenty-four hours after dissolution; I examined the body. The extremities were more flexile than usual after death.—Upon turning the body on the left side, a quantity of greenish coloured fluid issued from the mouth. The viscera of the thorax and abdomen being exposed, nothing remarkable appeared, except a greater degree than common, of distention from flatus. The stomach was distended to the capacity of at least three pints, from flatus, and about three gills of a muciform, greenish fluid; such as had flowed from the mouth; on the surface of which was plainly distinguished some of the masticated root. On this point the persons present spoke with confidence.* There were no appearances of inflamma-

^{*} A portion of the root, which was preserved and thrown into water, did not sink.

tion. I endeavoured to ascertain whether there were worms; but could find none. The liquid found in the stomach, after exposure to the air for half an hour in a vessel, assumed a dark

green.

Highly interested to know what the root was which had caused the boy's death; immediately after he died I went to the, ploughed ground whence he procured it; and soon found one of the same kind, entire, and of the size of a middling potatoe. It is, I believe, what botanists call a "tuberous root." off one of the knobs or buds, by which it was unequivocally ascertained to be of the same kind of that of which he ate a portion, and of which a piece was preserved. I planted the root which I found, in my garden; and perceive that its sprouts already begin to appear above ground; so that I flatter myself the ensuing seasons will develope its botanical character. The specimen which I send you, is a knob broken off from the main body of the root which I planted in my garden; and will, perhaps, at once, be recognised by you: if it should not, I hope ere long to exhibit the vegetable in its perfect form, and thereby obtain by your kindness, its botanical name and character.

Queries and Remarks.

On such occasions as the foregoing, what are the best means of exciting vomiting? In my opinion, the antimonials, are, without exception, the most improper that can be employed; for three reasons, first, They are by no means the most certain in their operation as emetics, secondly, They are liable to operate to excess: and thirdly, They exhaust the vires vitæ with a rapidity, and to a degree, which are of themselves dangerous, independent of the noxious quality of the substance swallowed.

I am not much acquainted with the efficacy of the sulphate of zinc in such cases, having exhibited it but in few instances with a view to excite speedy vomiting; and those instances have not secured to it any just claim to preference. This substance I conceive to be much less exceptionable in these cases than the antimonials; but not altogether free from bad qualities. It is an astringent, and therefore improper; for it is an object in such cases, to empty not only the stomach, but also the intestines. Now I know of no article that is so certain and so safe as an emetic, and that at the same time possesses a cathartic quality, as Ipecac. I know of no objection to it.

Might any advantages in these cases be derived from a combination of Ipecac. and olive or castor oil? I have not had sufficient experience to determine this question. I have a few times, in certain cases of disease, exhibited a large dose of olive oil, half a pint at once, as an emetic; and have been well pleased with its operation. Whether a combination of these or any other two or more emetico-cathartic medicines, would operate more expeditiously, more powerfully, and with more efficacy, than either would alone, I am not prepared to say; but if this be a fact with respect to certain articles possessing purely an emetic or a cathartic quality, I doubt very much whether it be true with respect to those, which, while they agree in some one quality, differ with respect to certain other qualities which they possess.*

I once had occasion to prescribe for a person who had swallowed forty or fifty grains of crude opium, with the intent of self-destruction. The opium had been down, at least a part of it, four or five hours, before it was known, and efforts made to excite vomiting; and then every means that was employed with a view to that effect, was altogether unavailing. Large quantities of Pulv. Ipecac. and of solution of sulphate of zinc, in warm water, were gotten down; and much exertion was made to keep the patient awake, and to titillate the internal fauces with a goose-quill; but all in vain: she expired in about seven hours after swallowing the opium.—Her system was completely prepared for the fatal effects of the opium; for she had recently been bled, purged, low-dieted,

&c. &c. so that it took the most powerful hold.

Pardon, Dear Sir, my prolixity; and believe me to be, with the most sincere respect, your most obedient and humble servant.

RICHARD HAZELTINE.

JACOB BIGELOW, M.D.

Lynn May 9th, 1818.

NOTE ON THE ABOVE.

The specimen which accompanied the foregoing letter was one of the fascicled or finger like roots of the Cicuta maculata. This plant which abounds in wet meadows throughout the United States, has produced death in many instances when it has been incautiously swallowed. It is one of the most sure and powerful of the narcotic poisons, being much superior in strength to the common hemlock. A particular description and a plate of this plant are published in the American Medical Botany, Vol. I. part II.

J. B.

^{*} See Transac. of a Soc. for the Improvement of Medical and Chirurgical Knowledge, Vol. 2d. p. 314, a communication by Dr. George Fordyce.

Case of Retention of the Placenta. By Thomas Chad-Bourne, M.D.

[Communicated for the New England Journal of Medicine, &c.]

NHE patient was a very small woman, and in labour with her first child. In a few hours the head entered the superior strait of the pelvis, and after several hours detention, the pains abated and she remained quiet, except occasional feeble efforts of the uterus, that produced nothing more than a disagreeable sensation of bearing down. She continued in this situation, until it was ascertained that she could not be delivered without lessening the head. After the brain was evacuated, it was with much difficulty the body could be delivered, owing to the size of the child, and the smallness of the pelvis. After waiting the usual time, an ineffectual attempt was made to take the placenta. The hand was at length introduced, to excite contraction and consequent separation, but without effect. Attempts were now made to insinuate the fingers between the placenta and uterus. This induced strong contraction, and the hand was firmly grasped, and immovably fixed, till the pain was off, when my attempts to separate were renewed till another pain came on. Gentle but persevering efforts were continued in this way nearly an hour, when the hand was withdrawn, much cramped and fatigued. I was induced to persevere much longer than I should have done, by the advice of an experienced physician present, who warned me of the great danger we should subject the patient to, by leaving it. The adhesion seemed to the touch cartilaginous—a small piece only was separated and taken away. The woman was put to bed, weak and exhausted by a tedious labour and loss of blood. Next morning the pulse was one hundred and thirty, with a dry tongue, hot skin, and unquenchable thirst. No more pain than usual in mild typhus. Fourth and fifth days, the fever gradually abated, appetite returned, and she was very comfortable. A dark fætid discharge from the uterus appeared on the fifth, and continued till the seventeenth day, without flooding. ing this period her water was drawn off with the catheter, and injections were made to wash away offensive matter from the uterus. This, with fomentations to the abdomen, and some simple medicines to allay fever, comprehends the treatment. Many medicines were recommended by the consulting physicians, but as her appetite remained good, none were admi-In the afternoon of the seventeenth day she was

taken with severe pain and flowing. The discharge of blood for a few minutes, was alarming, but stopped on the appearance of a mass of placenta, the size of half a saucer. This, with the portion I removed at first, was thought to be all, and we now considered the patient out of danger. Yet a fœtid discharge continued, and she had slight pains in the region of the uterus occasionally. But the functions of the stomach continued undisturbed-she slept well, and appeared to be gradually regaining her usual state of health. Saturday, the 12th of October, which was five weeks from her confinement, she was again taken with pain and flooding, and was delivered of another mass of placenta, that part to which the cord was attached. This last piece was examined by a respectable physician, (Dr. Green, who, to a regular education, has added the experience of fortyfour years active practice in this line of his profession,) who was satisfied of the reality of its being placenta. From this time her recovery was rapid, unattended by any untoward circumstances.

Writers on the subject of retention of the placenta, speak of it as exposing the woman to imminent danger, not only on account of hæmorrhage, but severe nervous affections, sickness, with great prostration of strength, and fever, have taken place and continued until the burthen be expelled. They speak of the placenta being retained without these alarming symptoms, as very uncommon. Many cases are on record in which the after birth-was expelled in a putrid state, and then alarming symptoms supervened, and carried off the patient. In those cases in which the placenta has been retained till death, a small frequent pulse—burning heat of the hands and feet—profuse perpiration, and universal emaciation carries off the patient.

IF there is sufficient novelty in the following case, to merit no-

tice, you will please to insert it.

In April, 1818, I was applied to by a man aged thirty, to remove a schirrous tumour, the size of a goose egg, under the right ear, that extended deep under the angle of the jaw. It was first discovered about nine years since. During the last year it has been painful, and impedes the motion of the jaw. About seven years since, he consulted Dr. Warren, sen. who informed him of his danger, if neglected, and recommended immediate extirpation, as it would terminate in cancerous ulceration. Owing to its situation in regard to the large vessels of the neck, the operation was slow and painful. Since the removal of the tumour, the mouth has been drawn towards the left side—the angle next the wound is so much lower than the

other, as to disfigure his countenance—the right side of the face has continued in a degree numb, or as he expresses it, asleep. He cannot close the right eye; when he attempts it, the eyeball is turned up so as entirely to hide the corner under the upper lid, and does not immediately recover its natural situation. It is now about three weeks since the operation. The wound has perfectly healed, and these disagreeable appearances continue.

There seems some difficulty in accounting for all this, merely by the division of nerves. It is true that the Porti Dura of the seventh pair that comes out from the stylo-mastoid hole, must have been cut, and this nerve is distributed all over the face; but then the fifth pair, with its numerous divisions, also go to the face, and could not have been divided. The motor oculi, or third pair, the nerve that supplies the muscles of the eye, must have been far out of the way of the knife, and yet the inferior rectus muscle seems to be paralyzed, and also the orbicularis palpebrarum.

Concord, April, 1818.

Account of an Improved Tourniquet.

[Communicated for the New-England Journal of Medicine, &c.]

NEWLY improved Tourniquet is offered to the sur-A geon, the advantages of which I take the liberty to detail to you. Being much lighter than any other instrument of the kind, it will not occasion irritation and excoriation; This, says an eminent French Surgeon, "I have seen from the application of the Tourniquet and it was a cause of a second amputation." However, no doubt exists but what the light and easy method, in which the Tourniquet sits upon the thigh, add essentially to the comfort of the patient and success of the operation. 2dly. This instrument differs from all others, by having the screw removable. When the screw is permanently attached to the instrument, the bed-clothes tend constantly to change its position, and the patients hands are frequently accustomed to turn the screw for amusement; besides, the pressure of the clothes upon this screw is felt with uneasy sensations, in the extremity of the stump. Now by removing the screw, and tying it within the reach of the patient, the above disadvantages are avoided, and every effect obtained. The buckle, which in other instruments is placed upon the thigh, is continually drawing the pad from off the Vol. VII.

artery, so that the surgeon must make an allowance for this circumstance, and place the pad a little beyond the artery, and thus by drawing down the strap to buckle it, he will draw the pad upon the artery; but if he now continues to tighten his straps more, he will draw the pad off the artery and towards the buckle; or one must hold the pad down while the surgeon buckles the straps. In the new Tourniquet no buckle comes upon the thigh, but is attached to the strap which constitutes the frame of the instrument. With regard to the strap, it may here be observed, the wider the strap the less is the compression; a strap, therefore, should not exceed one and one eighth of an inch in width. It should be made of double and twisted thread, and the thread should not be whitened, for this last process makes the strap more elastic and weakens it. The proper webbing is sold under the name of Tourniquet webbing. It is important that a compression should take place as near the pad as in any other parts; for if the pad is made to sink down by itself, two inequalities are formed in the integuments upon the top of the thigh. This circumstance renders the first incision imperfect, if the amputation takes place high up and near the Tourniquet. By the first incision these inequalities will be cut through first, leaving the parts between these but partly divided, hence the surgeon must divide these by a second incision. No such difficulty occurs in the application of the Tourniquet I now present you; this is obviated by the two rollers placed in the pad. In my instrument, the feel of the screw is easy and in every respect adapted to nice adjustment. This is effected by having the screw made of iron, and causing its female screw to be made in brass, these two metals move with ease upon each other. In Petit's Tourniquet, the assistant is obliged to exert much strength before he can effect the purpose, owing to the sticking of the brass surfaces, when they are in contact with each other; the more gradual the compression, the less the pain. Hence, the screw is made with a close thread; and, although the effect is by a few seconds slower, it is equally certain; and by length of screw any compression may be effected. The pad descends in a relative motion to the compression of the strap, so that all the integuments are powerfully compressed; hence, no danger will arise from small venous and arterial bleeding. The strap is doubled through its whole length, in order to prevent the buckle-tines from tearing out, since a great strain comes upon these tines. The Tourniquet may be applied most expeditiously by putting it over the foot, or the strap can easily be drawn from the rollers and then put round the thigh and

over the rollers and buckled. The straps should be drawn as tight as possible before the application of the screw. No cloth or pledget should be placed so near the pad as to obstruct its rollers, for by so doing, it will be drawn up with the strap over the rollers, and consequently will impede, if not wholly stop, the motion of the strap.

THOMAS_PRATT, jr.

Dr. JOHN WARREN.

Case of spontaneous Ptyalism. By Dr. Smith, Williamstown, Mass.

[Communicated for the New England Journal of Medicine, &c.]

WAS called to visit Mr. A. T. of Adams, aged fifty; I found him under the operation of a natural or spontaneous ptyalism; face and anterior part of the neck, tongue, sub-maxillary glands, and gums, much swollen and very red, with a few small white spots on the inside of the lips and on the gums; the glands and mucous membrane pouring forth a colourless saliva and mucus, (having a smell somewhat resembling that produced by calomel) at the rate as the patient said, of about a gallon in twenty-four hours; tongue covered with a white buff; respiration perfectly free; deglutition not much impeded; appetite perfectly good. The patient said, to use his own words, he was as hungry as a bear, and thought the smell of food was never more grateful to him. Such, however, was the extremely irritable state of the mouth, that he could not masticate the least food, and biscuit, made perfectly soft, felt in his mouth, as he said, like gravel stones. The arterial action was about one hundred in a minute, hard and full; bowels costive; skin dry; pain very severe: he compared it to taking fire in the mouth. Previous to my seeing him, he had not slept for seventy-two hours, but past the time in walking the room, or supporting his head on a stand or pillow, with a vessel to catch the mucus, which run a stream from his mouth. He had been perfectly well up to Dec. 6th, at which time he began to feel some soreness, and burning sensation in the mouth. together with the usual symptoms of taking cold; had not for months taken the least medicine of any kind, and, for several days previous, he had taken, except a glass of brandy, nothing but his common food. There was no appearance of any eruptive disease, which might have been the primary

cause of the ptyalism. This is mentioned, because I had known a man with chicken pox, under a natural ptyalism near-

ly as severe as this case.

The medical treatment was venesection, twenty oz., strong cathartic of calomel and jalap; for a gargle, borax, gum, myrrh, a little laudanum, &c. The patient soon improved, and recovered in a short time.

December 11, 1816.

On the Cure of Whitlow by Compression; By WILLIAM BALFOUR, M.D. of Edinburgh.

[From the London Medical and Physical Journal.]

opposite of each other: the one tends to promote, the other to prevent, the formation of matter. Such diversity of practice must have originated, one would think, in discrepancy of opinion, with regard to the disease being disposed to run a certain course. No man, surely, who thinks that the formation of matter can, with propriety, be prevented, would advise emollients; none, on the other hand, would prescribe astringents, who believed the formation of matter necessary to the cure of the disease.

The emollient plan of treating whitlow is now, I believe, generally laid aside; and, though the practice of applying astringents rests on sound principles, it is not efficient. It is but now and then, and in slight cases, that astringents will arrest the progress of the disease. If distension was confined to superficial vessels, as in slight cases of sore throat, astringents would quickly prevent the formation of matter in most instances. But, as the complaint is often deep-seated, it is impossible that the most powerful astringents'we possess can have much effect in diminishing the calibre, or in strengthening the tone of the distended vessels.

But it is not very evident, that the principle on which astringents produce their beneficial effects in whitlow has had its due consideration. If it had, we surely should not hear of some, whom we are bound to consider among the best informed of the profession, applying them warm. Heat must increase the distension of vessels already over distended, and produce that effusion which it is the object of the practitioner

to prevent.

My success in curing and relieving rheumatic complaints, by merely unloading and supporting the vessels of the parts 1818.]

affected, as detailed in my treatise on that subject, suggested to me the practicability of obviating and removing other inflammatory affections by the same simple means. This practice, therefore, I have adopted in whitlow, and with all the success that could be desired. A careful observation, indeed, of the phenomena exhibited in the first stage of whitlow, (and to this stage alone are my observations confined,) naturally leads to compression as the most likely means of arresting the disease. When the pain of incipient whitlow first excites a patient's attention, he perceives, in the part affected, a degree of tension which he did not observe before. An accurate observer must, therefore, connect, in his mind, this tension and pain, as cause and effect. In this he must be confirmed, on observing, that, with tension, pain also increases. We know, indeed, from experience, that tension is the cause of pain: for, no sooner are the vessels of the affected part unloaded, by leeches or the scalpel, than pain abates in proportion. It is evident, therefore, that whatever is capable of restoring the balance between the arteries and veins, must arrest the progress of the disease. This compression can do, as illustrated in the following cases.

CASE 1 .- About two years ago, Janet Bain, aged thirty-five, a servant, was seized with whitlow in one of her thumbs, after having been employed a whole day in the bleaching-green during very cold weather. When she applied to me, the whole thumb was swelled, painful, and of a livid colour; she knew no cause for her complaint. I never saw any case of whitlow of so deep a colour, and apprehended the very worst issue. I applied compression with the hand for a considerable time, and then with a bandage. I had little or no hope, however, of these means proving of much advantage. From the pain and appearance of the thumb, I was afraid that mortification would quickly supervene. The patient did not call upon me again for some days, when I found her thumb perfectly well. The family surgeon had called soon after she left me, and she was ordered to put herself under his care. The bandage I applied being still about the thumb, she satisfied herself with a verbal account of the pain and appearance, without informing him she had consulted any one. The surgeon advised a warm-vinegar poultice. With this, the patient would not comply; but agreed to adopt so much of his advice only, as she imagined was not inconsistent with my directions. She, therefore, dipped her thumb in cold vinegar, without undoing the bandage. This had all the effect of tightening the bandage, without undoing it; and the cure was thus speedily

completed.

CASE 2.—Towards the latter end of 1816, a lady received a severe blow on the middle joint of her middle finger, right hand, from the falling of a window upon it, the pulley of which was broken. The pain, which was extreme, soon abated, but was followed by swelling of the whole finger, extending over a considerable portion of the back of the hand especially in the course of the extensor tendon of the finger. fortnight elapsed, from the evening of the accident, before I was consulted. During this period, the tension and pain had gradually increased, and were now extreme. The whole of the finger and back of the hand were pained, but chiefly the middle joint and first phalanx; and some idea may be formed of the distress of the patient, from the circumstance of my being called to her, for the first time, at eleven o'clock at night. The tension, throbbing, and pain, were insufferable, and must soon have terminated in suppuration. I applied compression over all the parts affected, with my fingers and thumb; at first, in a very gentle manner, and gradually with more freedom, as the feelings of the patient would permit. By these means, I reduced the swelling perceptibly in a short time, and then applied a narrow fillet circularly the whole length of the finger, and with a degree of tightness which could not have been suffered without the previous handling, and which was still regulated by the patient's feelings. I directed her to keep the joints of the fingers a little elevated during the night, and to slacken the bandage if necessary. Next day, I found she passed the night comfortably, without having occasion to undo the bandage; and that both swelling and pain had greatly abated. All the symptoms, indeed, were so much ameliorated, that the patient insisted on omitting the bandage. On the following day, the second from the time I was called, she was menanced with a return of pain. I was again sent for, and renewed my operations. In a day or two the pain ceased entirely and permanently.

Case 3.—About twelve months ago, a young lady was seized with whitlow in one of her thumbs, without any assignable cause. After suffering a gradual increase of pain for ten or twelve days, she became, at last, quite impatient and consulted me. I found the whole of the last phalanx tense, red, shining, and excruciatingly painful, especially about the root of the nail. The whole hand was, in some degree, affected; and the pain shot as high as the elbow-joint. On examination, I told her, suppuration had either taken place, or was on the

point of it; so that she was rather late in applying, for my mode of treatment to take effect. I applied compression, however, with the hand, in a degree she could easily bear, with the view of preventing extensive suppuration, and then a narrow fillet. This operation was repeated three or four times in the course of two days, when pain and swelling disappeared, leaving a single speck of pus at the point of the thumb, immediately under the skin;—to this, I gave vent by the slightest touch of the lancet, and the wound healed up immediately. That the formation of pus was checked by these operations, after it was begun, there cannot, I think, be a doubt.

CASE 4.—Colin Mackenzie, aged forty-six, applied to me for advice, on the 6th of August, 1817, on account of the little finger of his right hand, which was swelled and excruciatingly painful, from the middle joint to the point inclusive. He knew no cause for the complaint, which had been gradually increasing for eight days, and now prevented him entirely from following his occupation. These symptoms, and the glossy appearance of the finger, left no room to doubt that this was a case of severe whitlow. I applied compression over all the parts affected, with my finger and thumb, moved from place to place in succession. The joints, indeed, were so very painful, that the patient could scarcely suffer them to be touched. But, proceeding leisurely and with caution, I overcame this tenderness in about fifteen minutes. I then bound up the finger its whole length, with a piece of narrow tape,—regulating the degree of compression by the patient's feelings. This took place at eight o'clock in the evening, and I directed him to slacken the bandage before going to bed, if he found it too tight. This he did, and also next day, while at work. He called on me again at eight o'clock in the evening of the 7th, twenty-four hours after the first operation, when I found the swelling generally gone, and the pain greatly abated, except at the middle joint, which was originally most painful, and to which the patient did not re-apply the bandage sufficiently tight when he had occasion to undo it. This joint was, therefore, more swelled and pained than ever. I applied compression to it as before, till the patient admitted that both tension and pain were relieved; and then the bandage. Next morning, at ten o'clock, the tension and pain were so nearly removed, that almost complete flexion of the finger was restored. Thus, in the short space of thirty-eight hours, was this man relieved from a complaint, which, under the usual

treatment, must infallibly have ended in suppuration and pro-

tracted suffering.

CASE 5 .- James Briddet, a tanner, aged twenty-five, applied to me on the 25th of August, with whitlow in one of his thumbs. He knew no cause for the complaint, which had existed a week, and was now likely to prevent him following his occupation. The whole thumb was affected, but particularly the two joints; and the inflammation about the first joint and ball was such as to make me observe to the patient, that certainly the parts were coloured by the substances he had occasion to handle when at work. He assured me the appearance of the parts was entirely the effect of disease. I found this fellow quite sceptical with regard to my mode of cure. When I had handled the parts and applied a bandage, I desired him to call next day. He looked at me, as if he would have said, "Is this all you are to do for me?" He called next morning, however, when inflammation and swelling considerably abated, especially about the first joint. last joint was still painful. In the evening of the same day, this joint was also much better. Next day the third inclusive swelling and pain were almost entirely gone; and the patient had the free use of his thumb. I now asked him, if he was not, at first, quite distrustful in the mode of cure I adopted? He admitted he was, expressed his surprise at the result, made his acknowlegements, and went about his business.

CASE 6.—Peter Fraser received an injury on the 26th of December last, by having his left thumb bent forcibly backwards, when assisting at lifting a heavy stone. When he applied to me on the 29th, he complained of having passed three days in great agony, and three sleepless nights. The pain was confined to the first joint, but the swelling extended a considerable way upwards. I never handled a more excruciatingly painful case, and I believed it must soon have terminated in suppuration. Such was also the opinion of Dr. Anderson, of New York, who happened to be with me when the patient presented himself. I told that gentleman, that, exquisitely painful as was the complaint, I had no doubt of curing it in a week, without any other application than my own fingers and a piece of narrow tape. The cure was completed in six days, inclusive of that on which the patient ap-

plied to me.

I shall make some observations on these cases hereafter; in the mean time, I would say of the mode of cure, " Si guid novisti rectius istis, candidus imperti; si non, his utere me-

January 8, 1818.

Vol. VII.

Cases of Typhus Fever, with Observations on the Nature and Treatment of that Disease. By J. C. PRICHARD, M.D. F.L.S. F.W.S. Physician to the Infirmary, and to St. Peter's Hospital in Bristol.

[From the Edinburgh Medical Journal.]

I DOUBT not that Dr. Armstrong's excellent work on Typhus Fever will be productive of much benefit to the community, by directing the attention of medical practitioners to the most powerful resources which they possess, for arresting the career, or mitigating the violence of that formidable malady. There is, however, a deeply rooted prejudice in the public, and even in a considerable part of our profession, against the evacuation of blood in continued fever; and it is scarcely to be hoped, that this will give way at once to the evidence afforded by any one work, however satisfactory that evidence may be to those, whose minds have not been rendered inaccessible to it, through the influence of previous opinions.* It is therefore much to be desired, that those physicians who have had opportunities of putting their practice to the test of experience, would communicate the results of their observations to the public. The greater the range of facts which shall be set before the faculty, the more speedily will that conclusion be obtained, which sooner or later must necessarily follow, -namely, a settled and universal conviction,

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^{*} I ought to observe, that the vulgar prejudice against bleeding in various disorders is fostered and encouraged by some medical practitioners, who, to the disgrace of their profession, seek a short-lived popularity by coinciding with, and putting themselves on the side of the prevailing notions. An instance of this kind lately fell under my notice, in the case of a gentleman of plethoric habit labouring under epilepsy, for whom, in conjunction with another physician, I prescribed venesection. This gentleman afterwards went to South Devon, where he resides, and there fell under the care of a physician and apothecary, possessing extensive practice in that district. These persons assured their patient, that drawing blood in epilepsy is a practice fraught with the most imminent peril; that the frequent use of venesection is a most dangerous innovation on the more cautious methods of the old school; and that the whole tribe of scribblers, who are continually filling the medical journals with such alarming accounts of their sanguinary proceedings, deserve to be hanged up, and gibbetted without mercy, as little better than licensed murderers. I have detected many other instances, in which this kind of ruse has been exercised by crafty persons; but I have generally bad the pleasure of observing, that stratagems in medical practice at length defeat themselves, and that the fair combatant is ultimately left in undisputed possession of the field.

that bleeding, and other antiphlogistic means, are not less appropriate in typhus fever, than in punemonia, though the adoption of them requires greater circumspection in the former di-

sease than in the latter.

During the last winter, typhus has prevailed in Bristol and its vicinity, to a much greater extent than for many previous years. It would require a more ample investigation than I am at present able to make, to shew satisfactorily to what causes the late prevalence of this disease is to be ascribed. The most obvious circumstance that presents itself, is the want of sufficient nutriment, to which the poor in some parts of this country have been subjected during the last winter, and the bad quality of the bread on which they have chiefly relied for daily sustenance. It may, however, be doubted, whether this cause has produced much effect among the stationary inhabitants of Bristol and its vicinity, although it is true that the disease has prevailed principally among people of the lowest class. The contributions raised for the relief of the indigent have been so ample, that there has not been. much real want, at least of articles of the first necessity, and typhus has extended itself in many situations, where it could not be supposed that its prevalence was favoured by deficiency of wholesome sustenance. But it seems to have been introduced into Bristol by mendicants, and other vagrants, from different parts of the country; and it is not improbable that extreme privation may have rendered these persons the more ready victims of the exciting causes which give rise to. this disease. The contagion first shewed its effects in the house of confinement called Bridewell, and in the passengers' wards in St. Peter's Hospital, whither the beggars and vagrants of all descriptions resorting to Bristol are conveyed, and where they are detained until they can be sent forward to their parishes, or to Ireland, the native country of a great proportion of them. As soon as the existence of the contagion in these wards was known, all the measures that could be devised were taken, by order of the humane deputy-governor of the hospital, to prevent its dissemination. All the persons found to be infected were immediately removed to fever wards. Yet, as there were constantly new accessions of paupers, who brought with them the seeds of the disease, it was long before the house became entirely free from this pestilence.

The effect of free ventilation was strikingly exemplified during the prevalence of this contagious fever in Bristól. The wards in St. Peter's Hospital are very small, having been originally destined for the abode of paupers, and not for the

treatment of diseases, and, as the number of patients was considerable, it was impossible to prevent them from being lodged in too confined a space. Here the disease spread itself among those who could not be withheld from communication with the sick: the apothecary and the nurses, and other persons who frequented the fever ward, caught it. In the Bristol Infirmary, where the wards are very spacious and well ventilated, some patients, who laboured under fever of precisely similar character, were lodged at the same period. The Infirmary contains no fever ward, and these patients were placed in the same apartments with the other sick, yet no instance occurred of its communicating itself, either to the patients or nurses.

In a great measure, the results of my own observations on typhus coincide with the remarks of Dr. Armstrong; and I can bear ample testimony to the truth of many of that gentleman's assertions with respect to the treatment of other diseases mentioned in his work. But on one point I cannot help materially dissenting from him, and that is in a pathological question, which is of considerable importance in a practical After having attentively noticed the symptoms and progress of contagious fever, in a great number of cases which have fallen under my observation, I am very much disposed to believe, that there is no such distemper as what Dr. Armstrong, with some other authors, denominates Simple Typhus. I have scarcely ever witnessed a case of this fever, in which there was not some internal organ that appeared to labour more severely than the rest of the system, and exhibited symptoms which I was disposed to attribute to some local congestion, or inflammatory action, and in the greater number of instances these symptoms have been nearly unequivocal. I believe the doctrine respecting fever, maintained by Dr. Clutterbuck and some others, gives too confined a view of the nature of this disease. The facts adduced by Dr. Beddoes seem to authorize the inference, that, in a great number of cases, proofs of inflammation are more clearly discoverable in the stomach, lungs, or other viscera of the thorax or abdomen. than in the brain. Yet I cannot but coincide, on the whole. more nearly with Dr. Clutterbuck's opinion, than with Dr. Beddoes's, so far, at least, as to regard the general affection of the constitution in typhus as depending on the local disease. This opinion I know to be contrary to the most prevalent doctrine in medical schools and among medical authors; yet as many false notions have long continued to be current from the effect of their previous ascendancy, I do not consider this as a proof that my own observations are at variance

with the results of general experience. There is one writer, however, who has taken the same side of this question which I am disposed to hold; and it will be seen, that the facts I have to adduce, tend, as far as their evidence goes, to confirm the opinion which he has maintained respecting the nature and treatment of continued fever. I scarcely need add, that the author to whom I allude is Dr. Mills of Dublin, to whom the profession and the public are much indebted.

I shall hasten to insert, in as brief and condensed a manner as possible, some notes referring to a few of the cases of typhus, which I have lately treated in St. Peter's Hospital; but I wish, in the first place, to state one or two considerations, which are favourable to the notion that this fever is a

symptomatic rather than an idiopathic disease.

I am persuaded, that if any physician, who would divest himself of the influence of previous opinion, should attentively examine a number of patients labouring under typhus, he would, in almost every care, be naturally led by the symptoms to infer, that there must be some particular organ severely affected, in which was the primary seat of the disease. The idea of some deeply sealed inflammation, giving rise to a train of constitutional symptoms, is much more consistent with probability and the general analogy of facts in pathology, than that of a general derangement of the whole constitution occurring independently and primarily. So repugnant, indeed, to probability, has the latter opinion appeared on a closer view, that most of those adventurers in medical theory, who have framed hypotheses to account for the phenomena of fever, have thought it proper to refer the primary affection to some particular structure; some of them fancying the nervous, others the vascular, system, to sustain the first shock.

The opinion which will probably be allowed to be most consistent with the general tenor of pathological observations, will be supported, in a large majority of cases, by an appeal to facts, for it is conceded by all, that the instances are very numerous in which typhus is found, on dissection, to have been connected with local disease. It was long ago observed by Riverius, that acute and malignant fevers very rarely happen without the inflammation of some viscus; and this assertion is repeated even by Beddoes, who allows, that it has been confirmed "in every single epidemic where search has been made, and often without search." Why do we persist in declaring the morbid appearances which manifest themselves, and which seem to be adequate to account for the previous phenomena,

to be only accidentally connected with the disease? We have only to extend the same determination to other maladies, and we immediately deprive ourselves of the whole of the resources derived for the improvement of our art from

morbid anatomy.

Such has been the general evidence which anatomical investigation has afforded, and if this evidence has not been uniform, we must take into consideration the very imperfect manner in which these examinations have often been conducted. With respect to those cases which terminate in recovery, and do not give us an opportunity of anatomical investigation, we may observe, that they are chiefly such as have been treated from the beginning by those means which are calculated to subdue visceral inflammation, and that the more regularly these measures have been pursued in the early stage of the disorder, the greater is the chance of recovery. In my own practice, I have constantly observed, that the most successful measures were those, that were founded on the supposed presence of some local inflammation.

It is true, that cases of typhus fever occur, in which no symptoms appear, that may be considered as giving unequivocal proof of the existence of topical affection. But here it is surely more philosophical to reason from the known to the unknown, and comparing these doubtful cases with others concerning which there is no doubt, to infer, as a probable fact, the existence of those morbid causes which, in the majority of cases, we ascertain. Examples are not wanting to show, that deeply seated inflammations of the viscera may exist for a considerable time, and even occasion the death of the patient, without ever giving rise to symptoms that enable the medical attendant to detect the real nature of the malady. case was lately mentioned to me by Dr. Craufuird, of Clifton, which fell under his observation thirty years ago, the circumstances of which strikingly illustrate this remark. A man was seized with the usual symptoms of typhus, and all the appearances which characterize that disease took place in their regular course, nor was the least suspicion entertained of the existence of any other complaint, or of any thing uncommon in the nature of the case. The patient lived upwards of three weeks, and after death, when his body was examined, a sac full of pus was found adhering to the coats of the duodenum, near the pylorus.

Even in fevers of a remittent type, as the yellow fever of America, in which it seems, at first sight, less probable that the morbid action of the system depends on local disease, we

are informed, on the best authority, that the cause of death is generally inflammation in the brain, stomach, or liver. And in the intermittents of Europe, we have distinct proofs of the existence of topical affection, in those tumefactions and indurations of the liver, spleen, or other viscera, which are often the consequences of protracted agues. And we find, not unfrequently, that the most obstinate intermittents, which had resisted the cinchona and other specific remedies, yield readily to venesection, freely employed, and to gentle courses of mer-

cury and saline purgatives.

But the circumstance which, more than all others, leads me to the conclusion that fever depends on local inflammation or congestion, is the remarkable effect which I have never failed to experience from the use of topical bleeding. Patients in the early stage of typhus, who complain of severe pains in the head, attended with intolerance of light and suffused eyes, which are the frequent precursors of delirium, are, as I have constantly observed, much more relieved by local bleeding, as by leeches, applied to the forehead and temples, and followed by blisters, than by general bleeding; and a similar remark applies to the cases of congestion or inflammation in other parts of the body.

From the 12th of January last, until the 12th of the following May, forty-one cases of typhus occurred in St. Peter's Hospital, or were received into it from Bridewell or other places. Out of this number five patients died. It must be observed, that the latter were either persons of advanced age, and previously very infirm, who had for many years lived as paupers in the house, or they were cases in which there was no opportunity of adopting the appropriate means during the early stage. Of those patients who were not very old and infirm, and for whom topical bleeding and other similar means were prescribed within ten or twelve days after the attack, the whole number recovered; and the alleviation of the symptoms followed so closely the use of the means employed, as to leave no room for doubt that it was affected by them.

I shall begin by stating briefly a case, in which I had it not in my power to adopt the means I wish to recommend, until it was too late. This case may be compared with others which occurred under precisely similar circumstances, and which resembled it closely in the early symptoms, but which were dif-

ferently treated, and had a different result.

March 15, 1817.—WILLIAM BOSTOCK, aged 14, of robust and healthy constitution, has been troubled during the last

nine days with frequent rigors, followed by accessions of heat, and with constant headach. He now complains of violent headach, and pains in his back and limbs. His skin is hot and dry. He has great thirst. His tongue is covered with a brown fur. His bowels rather constipated. Pulse 100.

He was ordered to take immediately half a drachm of a cathartic powder, composed of one part of calomel with four of jalap; and, at night, a draught, containing Liq. ammon. acet. 3ss., Aq. menth. sativ. 3i.; and blisters are applied to his

temples.

16th.—Continues without any perceptible relief. The bowels have been freely opened; pulse 100.

R Pulv. antimonial.

Submur. hydrarg. aā gr. ii. Sumend. omni tertia hora. 17th.—He is rather better; pulse 100. Continues the powders.

19th.—He has very little fever, but is still languid.

During the next four or five days he seemed to be getting better, and even went occasionally out of the ward, but still complained of great languor, torpor, and weakness in his limbs. On the 25th he complained again of violent pain in his forehead and through his temples; his skin was hot and dry; his tongue brown; pulse 120; pupils contracted; and he had nausea, and a disposition to vomit. This was the nineteenth day from the beginning of his indisposition.

Sumat submur. hydrarg. gr. v. sextâ qq. horâ.

Hirudines xii. super temp. admoveantur.

26th.—He is not relieved in any respect. Pulse 120; bowels open; stomach is very irritable, and rejects everything; headach severe.

Capilli aradantur, et vesicatorio occiput et vertex coope-

riantur.

Repet. submur. hydrarg.

27th.—Says his head is very full of pain; tunica conjunctiva inflamed; groans, and grinds his teeth frequently; is occasionally delirious, but conscious when roused; pulse 130, small.

Hirud. viii. temporibus.

Submur. hýdrarg. gr. vi. sextâ, qq. h.

28th.—Continues under great languor and depression; frequently sighs; pulse 160; bowels costive.

Enema commune statim injiciatur, et repet. vespere.

Hydr. submur. gr. x. statim sumenda.

29th.—Has had four stools during the night, dark-coloured, and offensive. He is speechless, but still remains conscious,

and free from delirium; head very hot; pulse 160, and feeble.

He was ordered to take an ounce of port-wine occasionally. 8 P.M.—The wine renders him hot and restless; tongue of dark-brown colour, and dry.

Omitt. vin.

Hirud. viii. temp. Hydr. submur. gr. x. statim.

30th—He has had a restless night; pulse 165, very small;

skin hot and dry; he lies in a comatose state.

At 10. P. M. he expired. The apothecary was prevented from examining the body, by the interference of his parents. The following cases I had an opportunity of treating accord-

ing to the method I have above recommended.

March 25, 1817.—John Franknell, aged 22, of spare habit, low stature, says he has suffered much from headach during the last six days, but was able to go abroad until yesterday evening, when he was attacked by cold shiverings, succeeded by heats, sickness, and thirst; he labours under general anxiety, and appears to have some oppression in his chest; countenance languid and anxious; great prostration of strength; pulse 100; tongue covered with a dark-brown fur. I prescribed as follows:

Sanguinis emittatur ex brachio libra i. Emplast. cantharid. sterno imponatur.

R. Hydrarg. submur. gr. vi.

Pulv. antim. gr. iv. M. ft. pulv. sumend. statim.

Sumat ol. ricini 3ss. hac vespere.

26th.—His pulse has become more frequent since the bleeding: it is now 120; suffers less anxiety and oppression; skin hot and dry; complains of pain all over his body, as if he had been beaten; throbbing pain in his forehead and temples; bowels freely purged.

Capilli abrad. hirudines viii. temporibus imponantur, et

vesicatorium nuchæ.

Sumat hydr. submur. gr. iv. et pulv. antim. gr. iii. quar-

ta qq. h.

27th.—Bled very freely with leeches; head not so painful; feels himself better than yesterday; pulse 105; bowels open.

Repet. med.

28th-—Is considerably better; tongue still covered with a dark greenish-brown fur; he is very languid and stupid, but suffers no pain; pulse 120; bowels open.

Repet. med.

29th.—Complains of nothing but extreme weakness; pulse 100. Last night he had some sleep.

Repet. med.

30th-Tongue considerably cleaner bowels open; pulse 100.

Sumat. pulv. bis in die solummodo. Milk diet.

31st.—Free from fever; very languid; bowels open; pulse

Let him have some meat, and a pint of porter daily.

April 3d .- Rapidly convalescent. Sent to the Convalescent ward.

CASE III.

March 18, 1817.—James Leggett, ætat. 11, has complained of pains in his limbs with frequent shiverings, during the last two days. About two o'clock this morning his head became very painful; skin hot and dry, with a troublesome degree of thirst; tongue covered with whitish fur; pulse 120, rather full, and not deficient in strength.

Sanguinis ex brachio emitt. Zvi.

Pulv. cathart. (composed as above mentioned) gr. xii. statim, et eadem dosis vespere.

Haustus effervescens tertià qq. horà.

8 P. M.—Bowels freely opened; head not relieved.

Hirad vi. temporibus imponend:

19th.—Continues nearly in the same state as yesterday, except that the pulse, which is 126, is neither so full nor so hard as it was; blood slightly inflamed.

Ik Hydrarg. submur.

Pulv. antim. aā gr. iii. Sumend hora somni.

Repet. haust. efferves. quarta qq. h.

20th.—Is nearly as he was yesterday; pulse 126; he has been considerably purged.

21st, 22d, and 23d.—Continues without any remarkable al-

teration; pulse 126.

25th.—Says his head is very much pained; talks incoherently at times, and groans much in his sleep; pulse 120.

Hirudines vi. temporibus. Palv. cath. gr. xii. hac nocte. Repet. calomel. et pulv. antimon. et haust. effervesc.

26th.—Head still painful; talks constantly; cannot bear the light; bowels very open.

Epispasticum capiti. Repet. med. 27th.—Says his head is not better; bowels very open, grinds his teeth frequently; pulse 126.

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Hirud. vi. temporib. Submur. hyd. gr. iii. et pulv. antim.

gr. ii. quartâ qq. h.

28th.—Is to day much disposed to sleep; bowels open; pulse 126.

29th.—Speaks more collectedly; tongue more moist; pulse

100; bowels open.

30th—Considerably better; slept the whole of last night; has eaten some bread and milk this morning.

Rep. pulv. bis die. "Milk diet.

31st.—Continues to improve; complains of hunger.

April 2d .-- Sent to the Convalescent ward.

CASE IV.

March 27th.—Peter Flatcham, ætat. 14, was attacked this morning with shiverings, and felt as if cold water were running down his back; he complains of pains all over him; skin very hot and dry; pulse 120, rather full; great prostration of strength.

Fluant sang. 3vi. ex brachio. Pulv. cath. Di. statim.

28th.—Considerably better; freely purged; blood not inflamed; pulse 112; has pain in his left side, with a slight cough.

Epipast. lateri. Pulv. antim. et hydr. submur. aa gr. iv.

quarta qq. h.

Haust, anodyn, horâ somni.

29th.—Feels himself better; pulse 105; pain in his side and cough quite removed.

Repet. med.

30th.—-Fever considerably abated; tongue moist; slept most of last night; suffers no pain or uneasiness.

Repet. med.

April 2d.—His appetite has returned; is in all respects much relieved.

Milk diet.

5th.—Discharged cured.

CASE 'V.

February 1st.—John Jones, a sailor, æt. 24, has been troubled three or four days with a headach. Last night his head became violently painful; he had severe and frequent shiverings; pulse 100; tongue white and moist; he suffers anxiety and oppression in the chest, but has no cough or pain in respiration.

Vena sec. et emittantur sang. 3xvi.

Pulv. cath. 3ss. statim. Vesicator. sterno.

2d.—Head relieved; respiration free; pulse 100; his blood was inflamed.

Haust. effervescens cum antim. pulv. gr. 1. quarta qq. h. 3d.—Tongue covered with a dark-brown fur; pulse 100; says he is free from pain; bowels purged.

Repet. med.

4th.—Is considerably worse than yesterday; pulse 100, fuller; complains of much pain in his head, and of general languor and depression of strength.

Hirudines viii. sterno et iv. temporibus admoveantur; Pulv. cath. Di. statim. Repet. mist. salin. antimonialis.

5th.—Lost much blood by the leeches, and was much relieved; pulse 96, soft, and not full; bowels open.

Repet. haust.

6th.—Is much better; tongue now clean; pulse 90, weak; bowels quite open; he is very weak.

Let him have a pint of porter daily.

7th.—Quite free from fever; still very weak.

10th.—Is able to sit up.

Full diet.

Henceforward he continued to recover.

CASE VI.

February 7th.—SARAH FLOOD, aged 18, has complained of headach during the last three days; was attacked last night with cold shiverings, succeeded by heats, and violent pain about the fore part of her head; pulse 106, rather full; skin hot and dry.

V. S. ad 3x. Vesicatoria pone aures.

Pulv. cath. Bi. statim.

R Hydr. submur. et pulv. antimon. āā gr. iii. tertia qq. h.

Haust. effervescens sæpè.

8th.—Complains much of her head; pulse 100; bowels open; blood not inflamed.

Hirud. viii. tempor. Repet. med. et pulv. cath. h. n. 9th.—Head less painful; is extremely languid; skin hot and dry; tunicæ conjunctivæ red; bowels very open.

Haust. efferv. quarta qq. h. Let her be sponged with

vinegar and water.

10th.—Is better; skin moist; tongue clean; she is very drowsy, stupid, and deaf; pulse 96, weak.

Habeat vini Lusitan. 3i. ter in die, et Haust. effervescens

sextà qq. h.

12th.--Is considerably better. Continue.

16th.—Convalescent.

CASE VII.

March 11th.—Anne Marsh, æt. 38, of stout make, and strong constitution, has complained during the last three days of headach, with pain in her limbs. This evening her symptoms became much aggravated. Pulse 112.

V. S. et fluant sang. 3xvi. Pulv. cath. 3ss. statim, et

repet. cras manè.

12th.—Pains much alleviated; still much headach; belly quite open; urine hot, and in small quantity.

Pulv. cath. 3ss. mane. Haust. effervesc. P. antim. c. calomel aa gr. iii. sexta qq. h.

13th.—Head better; pulse 106, not so full; bowels very open.

Repet. med.

15th.—Is considerably better; pulse 96; tongue moist; complains of great weakness.

18th.-Gone to the Convalescent ward.

Case VIII.

February 7th.—Anne Barron, et. 40, one of the nurses of the fever ward, short, thin, and of delicate constitution, has complained of headach for some time, with a nauseous taste in her mouth. This evening the pain in her head became considerably worse, and she had cold shiverings. Her skin is hot and dry; pulse 100.

V. S. et fluant sang. 3x. Pulv. cath. 9j. statim.

Mist. effervescens. P. ant. c. calomel aā gr. iii. quartâ qq. h.

8th.—Not relieved; blood inflamed; bowels open; pulse

100; some pain about the chest.

Sang. emittatur ad 3 viii. Repet. med.

9th.—Head better; chest less painful; complains of her bowels being very sore; pulse 96, not full, but hard.

Emplast. canth. abdomini. Ol. ricini 3ss. quartâ qq. h. 10th.—Is much relieved; bowels quite open; mouth sore

from the mercury; pulse 96, not so hard. Continue the effervescing draughts.

11th.—Is much better; spits freely; is free from pain.
She continued to recover, and in a few days became fully

convalescent.

CASE IX.

January 13th.—MARY BARLOW, æt. 36, the mother of six children, short and stout, of florid and healthy complexion,

was suddenly attacked with cold shiverings, and felt as if water were running down her back. These sensations were succeeded by heats. She has much throbbing pain about her forehead, general headach, and pains in her limbs; nausea; abdomen somewhat tender when pressed; bowels constiputed; tongue covered with a brown fur; pulse 112, rather hard and full.

V. S. ad 3x. Pulv. cath. 3ss. statim. Haust. efferves-

cens. quartâ qq. h. Vesicator. abdom.

14th.—Continues nearly as yesterday; bowels well purged; pulse 114; seems to labour under some oppression in her chest, and coughs occasionally; head aches violently.

Hirud. viii. et vesicat. sterno. Vesicat. utrique tempori.

Repet. haust.

15th.—Head and chest relieved; bowels open; pulse 106, not so full skin hot and dry.

V. S. et fluant zviij. Let her body be sponged with vi-

negar and water.

16th, 17th, and 18th.—No very decided alteration has taken place, but her strength seems to be sinking; her eyes are suffused, and her countenance is expressive of great depression and anxiety; pulse 116; tongue covered with a dark-brown fur, and teeth with sordes.

I directed a small quantity of wine to be given her, noting the effect on her pulse and skin. I found that the pulse became more frequent, and the skin hotter. The wine was dis-

continued.

R Hydr. submur. gr. viii. Effervescing draughts. Ordered her to be sponged more freely, and drink cold

water, acidulated with muriatic acid.

20th.—Has had a restless night; calomel operated freely. She has completely the aspect of a patient in the advanced stage of typhus. She complains chiefly of her head, and has some oppression in respiration, with pain in her chest.

Leeches and a blister were ordered to be applied to the

chest, and eight leeches to the temples.

21st.—She is considerably relieved, both in her chest and head. She is now free from pain; pulse 100; is extremely weak.

Haust. effervesc. tertia qq. h.

22d.—Has no pain; very weak; tongue clean; pulse 96.

25th.—Free from pain. Let her have broth.

30th.--Convalescent.

CASE X.

March 13th.—Patience Croft, et. 22, of a strong and healthy constitution, has had headach during the last fortnight. She now complains of throbbing pain about the head, and of aching pains in her limbs; frequent shiverings; pulse 106, rather full.

V. S. et emittantur sang. 3xvi. Emplast. cantharid. utriq. tempori. Pulv. antim et hydr. submur. āā gr. iii. quartâ qq. h. Haust effervesc. sæpē.

15th.—Head better; limbs less painful; blood inflamed;

bowels very open; pulse 80.

16th.—Considerably better; mouth sore.

Omit the powder. 18th.—Convalescent.

I have the notes of a much larger number of cases lying before me; but omit to copy them, on account of the undue space they would occupy in your Journal. It will be sufficient to say, that they are, with respect to the evidence they af-

ford, similar to those above detailed.

It will probably be thought that much greater effect is here apparently consequent, and that I have placed more dependence on very small bleedings, than is conformable with general experience. But it should be remembered that the patients, of whose cases I have given the outlines, had been, in almost every instance, half starved, before they became affected by typhus fever; and I have always found that a few ounces of blood taken from patients under such circumstances, produce more effect on any inflammatory disease they may labour under, than much larger quantities from persons who had been previously well fed. At the Infirmary, where the patients are of a different description, being, for the most part, domestic servants, and other persons in less abject condition than the paupers in St Peter's Hospital, and in private practice, I have found it necessary to prescribe much more copious bleedings in order to produce similar effects.

Some of the above cases were so short in their progress towards recovery under the use of the evacuants administered, that the peculiar symptoms of the typhoid state had scarcely time to develope themselves, and a doubt may hence arise in the minds of some readers, whether they were genuine cases of typhus or not. In order to be convinced that they were such, it was sufficient to witness the circumstances of the origination of the disease in every single instance. I believe

there was scarcely one patient whose malady could not be distinctly traced to infection. As a proof of the virulence of the contagion, I may mention, that, at the beginning of the period through which it prevailed, a man who assisted in carrying to the grave the body of a patient who died under this fever, was seized with rigors immediately after his return, and

expired on the third day.

It must be allowed, that purging seems to have had a considerable share in mitigating the febrile action in these cases. It will be observed, also, that mercury was given in such a way as to effect the system, at the same time that it acted freely on the bowels. I always observe, that those patients whose mouths can be made sore, recover; but mercury often fails to produce this effect without bleeding, and it was evident to those who observed the progress of this fever, that the latter remedy, and especially topical bleeding, had by far the most decided effect on the disease. I may remark, that the apothecary, who, beforehand, was by no means inclined to think favourably of venesection in fever, was, during the prevalence of this contagion, so fully persuaded of its good effects, that, being attacked during his unremitting attendance on the sick, by the first symptoms of the fever, viz. severe rigors, headach, sickness, and excessive languor, and being convinced that he was infected, he immediately opened a vein in his own arm, and suffered about two pounds of blood to flow. On the next day he was nearly well.

For the notes of the above cases I am indebted to Mr. Morgan, the anothecary to St. Peter's Hospital, to whose assiduous and humane attention the poor of this city have been, on the present, and on many former occasions, greatly in-

debted.

Bristol, May 31, 1817.

On the Mercurial Treatment of Yellow Fever. By J. B. SHEPPARD, Member of the Royal College of Surgeons in London, and Surgeon in the Royal Navy.

[&]quot;Obstat quicquid non adjuvat."-QUINTILIAN.

HE various and opposite opinions which have been entertained respecting the nature and origin of the Yellow Fever, from our earliest acquaintance with the disease, have given rise to a corresponding diversity of treatment, which

has proved a constant source of embarrassment to the inexperienced, and of the utmost prejudice in its consequences to the interest of those whose welfare has been involved in the accuracy of the adopted pathology. The notorious contradictions which characterize the different creeds, would seem to preclude the hope of even an approximation of sentiment on this interesting subject. At one period, an erroneous nosological arrangement inculcates a treatment strictly stimulant, which occasionally yields to an opposite pathology, directing an active evacuant system; by others, viewed as a specific disease, it is opposed by a supposed specific remedy; while another class, vacillating between opinions, or desirous of availing themselves of every probable means of success, have recourse to the combination of the two latter practices, from which they anticipate more favourable results than from a solitary adherence to either. All these systems have had their seasons of ascendancy and of disrepute, supplanting each other again and again, in obedience to the predominant doctrines of the day. There is no want of evidence on record of the success of the whole of them; -of their failure we can best judge from the appalling aggregate mortality of the West Indies during the last quarter of a century. To those most conversant with the formidable nature of the disease, the latter circumstance will be less a source of surprise than the various triumphant accounts which daily meet the eye, many of which the more candid and best informed will be disposed to impute, rather to a comparatively mild form of the disease, than to any effect connected with treatment, -- an explanation not the most flattering to professional vanity, but which, in truth, however much it may be a subject of regret, ought not to derogate from the value of the art; for although there may be a degree of yellow fever which bids defiance to the powers of medicine, it is consoling to know, that subordinate forms of the disease more frequently prevail, in which we can take an active and eminently useful part. In proportion to the justice of our views of the nature of the disease, and the energy with which our curative measures are directed, will be the chance of arresting early fever, and of rescuing the patient from a succeeding state of the greatest suffering and risk; while by injudicious treatment the disease may be protracted, and even an originally harmless form of fever converted into one of extreme violence and danger; or, what more frequently happens, the period for doing good may be consumed in the exhibition of inert remedies, and the patient permitted to sink into the grave, without an adequate effort for his preservation.

The latter mode of proceeding applies strictly to the exclusive mercurial practice, on which it is at present my object to throw out a few observations.

It may be thought, that the ascendancy which the depletory treatment has of late years acquired in the West Indies, and the reprehension which the indiscriminate mercurial practice has received from time to time from more able pens, might preclude the necessity of further comment to accomplish its abolition; and I am aware, that to some these remarks may appear to be opposed to a phantom of my own imagination. Adverting, however, to the stress which had been laid by some recent writers on the beneficial combination of the mercurial and depletory practices in this and other fevers, by some of whom mercury is still designated as the chief means of cure; and knowing that the exclusive treatment by mercury had still its adherents when I quitted the West Indies a few years since, I am led to believe that the evil, even in its present limited extent, is of sufficient magnitude to warrant a free exposition of its effects, without incurring a just imputa-

tion of the offence of supererogation.

In order to appreciate the causes which may have led to the diffusion of the exclusive mercurial treatment of yellow fever, it will be necessary to glance at the state of the colonies at the period of its introduction. In the year 1793, the remote cause of yellow fever appears to have existed in most of the West India islands in a high degree of concentration, far exceeding that of many preceding years: the varying states of energy of the endemic cause in different years being cognizable only by their effects, an obvious difficulty accompanies every attempt to investigate the nature of the atmospheric modifications on which such vicissitudes probably depend. I do not profess to enter into such inquiry. It is probable that, in addition to a difference of degree, there may be some unknown change in the nature and constitution of the noxious miasmata; and, on this point, in explanation of the occasional attacks of the natives and long residents, M. Humboldt remarks, that a very slight variation, is sufficient to destroy immunity in those whose organs are become exquisitely sensible of variation from immutable uniformity of meteorological succession; a proposition which he illustrates by reference to Galvanic experiments, which prove that chemical agents excite not only by their quality, but by their order of succession also. The severe aggravation of the endemic in 1793, succeeding a long interval of comparative exemption, was considered to be capable of explanation only by reference

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to a contagious source, which was supposed to be traced to a new pestilence imported from Africa into the West Indies. Subsequent experience and investigation have shewn the fallacy of this assumption. The scientifick traveller above referred to observes, "The opinion that the yellow fever was imported from the coast of Africa into Grenada, and from thence into Philadelphia, is equally destitute of foundation with the hypothesis, formerly very generally believed, that a squadron from Siam introduced the vomito into America." The truth of this statement of M. Humboldt is now very generally acknowledged; and even those who, to express their belief of the contagious nature of yellow fever, inappropriately retain the name which, on that occasion, was conferred on it, in reference to its imputed foreign origin, do not contend for the validity of the African importation.

The sensation which the mortality of that period excited, is a proof how much that of former visitations must have been effaced from the recollection, to make it a subject of such surprise and novelty. We are now unfortunately familiar with many parallel events; and I believe there is a very general concurrence of sentiment, that they are to be ascribed to purely physical and local causes; an opinion which has received abundant corroboration from the absence of contagious properties in the various epidemics which have subsequently prevailed within the tropics, as well as from the unequivocal refutation of the accuracy of the data on which the assumption of importation was originally grounded.

That the germ of yellow fever was that year developed in an intense decree of force, and possibly with some variation of constitution also, is proved by the non-exemption of even the natives and long residents; and the great mortality which succeeded, and gave rise to the opinion of an imported new pestilence, was the inevitable effect of an unusual accumulation of unassimilated Europeans in an augmented military and naval force, and in merchant ships collected into convoy masses, in consequence of the recently declared war. The exposure of the men, strangers to these climate, to an exalted power of the noxious cause, is surely an adequate explanation of the vast loss of life which was then sustained, without reference to a contagious origin.

It may not be considered irrelevant to remark, that the events of the last year in the West Indies, in regard to yellow fever, bear a close analogy to those of 1793: the political changes consequent to the peace of 1815, as in the instance of the new war in 1793, had the effect of introducing

an increased number of northern strangers into the colonies; the coincidence of a similar aggravation of the intensity of the endemic cause, has produced a similar result. Of the sufferers on the late occasion, the new garrisons of the French islands appear to have formed a large proportion. France having been deprived of the last of her West Indian colonies in 1809, the troops in her garrisons, after their restoration at the peace, were necessarily strangers to the climate.

To return to the period of 1793, the publick apprehension was naturally commensurate with the mortality; and as credulity generally keeps pace with apprehension, can we be surprised that the doctrine of importation received general and

implicit belief?

A new and specific character being given to the endemic, a specific remedy was speedily proposed, and mercury announced as the only medicine capable of arresting its progress. It was held to be incontrovertible evidence of the efficacy of the remedy, that, in those cases where the sensible effects of mercury took place, recovery usually followed; and although the mortality under the new treatment continued to be excessive, yet as the greater number with ptyalism recovered, the failures were not permitted to affect the reputation of the practice.

It is probable, that the observation of the fact of the salivary glands being unintentionally affected, in some cases of recovery, by the calomel combined with the purgatives, may have led to the inference that the declension of fever was the effect of the salivation, whereas the converse of the conclusion is the truth; for, although the two events may appear to be synchronous, yet, as experience proves, that all attempts to excite the specific action of mercury in a system labouring under a high degree of fever are perfectly unavailing, until the fever be moderated by other means, we are justified in concluding, that the declension of fever, and the supervention of salivation, stand in the relation of cause and effect.

The coexistence of febrile and mercurial action is generally admitted to be incompatible; if therefore the action of mercury could be superinduced in violent fever, we should be possessed of an invaluable remedy; but in a high degree of fever we find mercury to be utterly powerless, in whatever quantity or manner it may be exhibited; and if exclusively confided in, the disease pursues its march unchecked, to disorganization and death, without the appearance of any sensible effect from the mercury employed. On the other hand, if a

mitigation of fever takes place, whether spontaneously in the milder cases, or from the employment of more efficient measures in the more severe, then salivation begins; and what is in truth a mere effect, and test of the cessation of fever, and in no degree contributory to the cure, is, by the advocates of mercury, exalted into the sole or chief cause of such salutary event. If, then, in the subordinate forms of yellow fever, the operation of mercury is found to be superfluous, and in the more severe, its employment is ineffectual, it will be difficult to imagine a case of the legitimate disease in which the adoption of the practice is indispensable; while it must be admitted, that an exclusive reliance on that remedy in all cases of serious import, is not merely futile and deceptive, but replete with the greatest danger.

The insensibility of the system under active fever to the stimulus of mercury, has been universally observed, and generally referred to derangement of the function of the absorbents in common with other parts of the system during the presence of the morbid actions which constitute fever. these actions cease, the absorbent function is restored, and the mercury previously exhibited, which until then had lain dormant, is taken into the system, and its sensible operation rapidly excited; but whatever may be the received opinion of the cause of such insensibility in that condition of the system, the fact itself is palpable, and perfectly conclusive as to the

inefficacy of mercury as a remedy in active fever.

It is every day remarked and lamented, that we are so little benefited by the errors and failures of our predecessors, and that our lessons must be dearly purchased in the school of experience, to be deeply imprinted on our recollection. would be of comparatively little moment, did the consequence devolve upon ourselves only; but it assumes a widely different aspect and interest, when the lives that are entrusted to us become the price at which wisdom is to be purchased. I cannot therefore sufficiently deprecate a repetition of fruitless attempts to mercurialize the system, to the exclusion of more efficient measures; or sufficiently caution the inexperienced against the vain expectation of achieving what others of the greatest talent and perseverance have failed to effectuate. The consequence is doubly injurious; it is not only the loss to day, which the industry of to-morrow may redeem; it too often involves the loss of those moments which cannot be retrieved, -when only the medical art can afford any effectual relief. These reflections are forced from me by a contemplation of the awful amount of mortality that has taken place in

the West Indies; and by the painful apprehension, that, on many occasions at least, this might have been diminished by a more efficient practice. It should, however, be recollected, that it was the bounden duty to those on whom the treatment of this disease devolved, at one time, to give every trial to a remedy so (otherwise) potent, and so highly praised; but after it has been so amply tried, and found wanting, the perseverance in a vain experiment is surely incurring no common responsibility: and therefore, it is at least to be hoped, that they who are still inclined to put it to the test, will employ those efficient measures at the same time, which are at once most conducive to its specific effect, and of themselves afford the most reasonable hope of subduing so formidable a di-

The advantage of the combination of the mercurial with other treatment, I believe, however, to be very questionable. In the more rapid and dangerous cases, in which two or three days decide the fate of the patient, (independent of the absolute inertness of mercury in high fever) there is not, in the majority of habits, sufficient time for the operation of the remedy to be excited, before the disease is either cured by more efficacions means, and salivation becomes worse than useless, or, in the less controllable forms of attack, the patient is irrecoverably lost. Still I admit, that the combined practice does not involve the serious objections which attach to the exclusive dependence on mercury, and am chiefly solicitious to detract from its rank as the principal means of cure. As a cathartic, the employment of calomel in early fever is acknowledged on all hands to be highly beneficial; but from the uncertainty of its operation, where there is much heat or torpor, it should not be trusted to alone, but always be given in combination with other purgative substances.

With regard to the remedies to which I have adverted, as possessing more efficiency than mercury in the cure of yellow fever, I have nothing new to propose. From the experience of many years within the tropics, I am disposed to coincide with those who believe that the disease, in the highest degree of concentration, is irremediable by any known means in medicine; for I have remarked, in this extreme case, that whatever plan of cure may be adopted, the rate of mortality remained unaffected by variety of treatment. Although this exalted character of the endemic is not rare, when a sufficient number of proper subjects is accumulated, yet, comparatively speaking, it may be deemed unfrequent when contrasted with the great number of cases that are classed and

cured under the title of Yellow Fever. In the minor degrees of violence of this fever, there is perhaps no disease in which the valuable powers of medicine are more decidedly displayed. The treatment may be comprised in a few words. The disease exhibiting violently inordinate actions in the beginning of the attack, early and commensurate depletion, copious purging, with the abstraction of superabundant heat, and the interruption of morbid associations by the affusion of cold water on the surface, comprehend the resources in which we may place the best grounded confidence that it may be subdued at an early period of the invasion. Should these remedies fail in obtaining an early mitigation of the symptoms, I cannot say that I have observed much decided good from medicine in the subsequent stages of exhaustion. It is our imperative duty, therefore, to direct all our exertions and means to a decisive impression on the system during the first hours, so as to cut short, or greatly to check the march of the fever. I must however here observe, that, though I have always bled decidedly in the early stage of yellow fever, guided rather by effect than by quantity, my experience leads me to doubt that I could have obtained, or that the abstraction of such large quantities of blood would have been admissible, as appear to have been taken in some less dangerous fevers.

I am aware, that there are exceptions to this rule of practice of active depletion; that a form of fever is occasionally met with in that climate, in which, from modification of cause, or of habit, the vital functions are, from the first invasion of the attack, depressed to a degree in which the immediate or general abstraction of blood might be hazardous, or even of dangerous consequence. In these circumstances, the development of vascular energy is promoted by immersion in the warm bath, after which venesection is often admissible, and proves highly efficacious in obviating the tendency to congestion.—In other cases of this low character of fever, the local abstraction of blood may be advantageously substituted for general depletion; and in a few rare instances of extreme deficiency of vital energy, and torpor, evacuations of blood are to be wholly prohibited, and the cure confided to the warm bath, blisters, and stimuli.

In the chronic structural derangement of some of the abdominal viscera, which is the occasional sequel of the continued yellow fever, but far more frequently of the recurrent form, and intimately connected with the degree of freedom or limitation with which evacuations have been used in the early

stage of the attack, the continued irritation of mercury is eminently serviceable, and commonly successful in the restoration of their functions. A removal to a more northern latitude is, however, not unfrequently essential to permanent re-

covery.

I have now stated the results of my own experience and observation on the powers of mercury in yellow fever, unbiassed by that of others. The concurrence of opinion of other observers in different times and in different situations, must however be considered as the strongest corroboration of the justness of these remarks; and with this intention, I shall append a short review of some of those which occur to me.

Dr. Jackson, from extensive experience in St. Domingo, admits the mouth is often affected when the disease is mild, or of a remitting type; but "on the contrary, where the disease is continued and ardent, or slow and creeping, with diminished sensibility of the skin, and impaired energy of the vascular system, enormous quantities of calomel either produce no visible effect, or the gums become spongy and livid, but no salivation ensues: the event is then unfortunate, or life emerged in a gradual manner. Further, it is a common observation, that where salivation actually takes place in continued fevers, it seldom shews itself till the violence of the symptoms has evidently abated: hence a suggestion arises, that the appearance of salivation is only an indication of the departure of the disease;—no proof exists, that the operation of the mercury is the cause of this departure."—(Outline of Fever, p. 294.)

Dr. Rush says, that mercury seldom salivated till the fever intermitted or declined. That the salivation came on during the intermissions, and went off during the exacerbations. (Med. Obs. and Inq. Vol. IV. p. 94.) And that in the city hospital, where it was chiefly depended on, and venesection sparingly used, more than one half died.—(Ibid. Vol. V.

p. 128.)

Dr. Grant states, that all who were treated by mercury died, and that they became more victims to the mercury than even to the fever.

Dr. Lempriere observes, if considerable relief was not obtained within the first twenty-four hours of the attack, congestions formed in the abdominal viscera and brain, to remove which, mercury was chiefly relied on; but it was found, that immense quantities of calomel were frequently exhibited with-

out exciting any apparent action, owing probably to the torpid state of the absorbents.

Dr. Bancroft thinks its utility in yellow fever, except as a purgative, greatly to be doubted; that it has been extensively tried in the army without success; and that, at any rate, its good effects have been very much exaggerated.—(Essay on

Yellow Fever, p. 76, et seq.)

Even Dr. Chisholm allows, that "there are circumstances in which, however, the utmost difficulty is experienced in obtaining this effect (salivation) from calomel, and others in which the candid practitioner must acknowledge its insufficiency."—Vol. I. p. 253.) And he mentions, that 2000 grains have been given without effect, when under the influence of disease.—(Vol. I. p. 429.)

Sir. James Fellowes says, he never saw advantage from the large quantities of calomel recommended in fever.—(Re-

ports, p. 406.)

I shall now proceed to state some of the opinions entertained as to the efficacy of mercury in yellow fever, more immediately within the period of my own services in the West Indies, by those whose official situations gave them the fullest opportunities of estimating its powers; promising, that the nature of my review precludes my adverting to a vast weight of oral testimony which I have enjoyed in communication with the medical officers of both services.

Dr. Dickson, whose opinions on this head I had ample opportunities of knowing, while I was surgeon of the flag-ship on the Leeward Island station, and who, from being furnished officially with the weekly reports of the respective surgeons of the fleet, possessed the most extensive sources of information, conceives that the mercurial influence is incompatible with a great degree of heat and vascular action; and that the most profuse exhibition of this medicine is unable to induce its specific effect during a state of high excitement, as well as in that form of fever, where the sensibility of the system is greatly impaired; where there is time, that is, in protracted instances, where the fever has abated, and the patient, having survived the danger of the earlier stage, labours under symptoms of congestion or organic disease, he is of opinion that mercury is often of the greatest service. But in this first stage of the concentrated endemic, he has generally found every attempt to produce ptyalism to be altogether fruitless, and he therefore concludes, that the cases wherein this has been affected must be referred to a remitting or milder form of disease; and fully coincides with those who are of opinion

that salivation "is not the cause, but simply an indication, of the cessation of fever." (Edinburgh Journal, January 1813.)

Dr. Macarthur, who necessarily enjoyed ample opportunities of determining the question at Barbadoes, in a report to the naval medical board, which was afterwards published, states, that, in the fevers of the crews of the Saint Lucia, and of the Amelia, in 1804, the mercurial practice was pushed to its utmost extent. "The submuriate of mercury," he continues, "in large doses given by the mouth,-mercurial frictions applied to the surface, alternated by the hot and cold baths to induce ptyalism,—were assiduously and perseveringly employed; but, however protracted the fever might have been, no instance occurred where the mouth could be affected in the worst fevers, which terminated in death. In the mild fevers, or where recovery began before the first thirtysix hours, ptyalism was easily induced before the expiration of that time. Many cases of protracted fever have occurred at this hospital, where the mercurial plan was omitted some days before there was any sign of convalescence, but the mercurial action in the mouth did not appear until the fever evidently had ceased, and it increased for some days with the convalescence of the patient. In other cases, where the mouth had been made sore by the mercury exhibited, the patients have had a relapse, and during one night the soreness of the mouth entirely disappeared. It is, therefore, evident, that so long as the morbid actions which constitute this fever existed, no mercurial action took place; but as soon as the fever ceased, the mercurial disease commenced. Ptyalism, therefore, was not the cause of the cessation of fever, but the consequence, and the soreness of the mouth only becomes a test of the absence of fever. But the patient pays too dear for this test, if it shall confine him to the hospital, or to his room, for three weeks or a month with a severe salivation, when otherwise, in one week, he would have been able to have returned to his ordinary duty or occupation. Mercury, such as the preparation of the submuriate, has been employed with much advantage as a purgative."

Mr. Mortimer, late surgeon to the Naval Hospital in Barbadoes, in his Official Report on Yellow Fever, observes, that from three to eight grains of calomel were exhibited by him every third hour at Mariegalante, aided by mercurial frictions, unlimited as to quantity; but in few instances, and in those only as a purge, did it evince any positive effect. The fever subsiding, salivation has come on; but however

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profuse this became, and, consequently, however protracted the recovery, it afforded no additional security against a future seizure. He farther states, that in all the other public situations which he has held, the only result from calomel, during high febrile action, was as before stated, and that not often; while, on the other hand, he has observed much distress to accompany the ptyalism, without any ultimate advantage: so that he cannot consider it in the light of a remedy, unless when combined with a cathartic. (Med. Chir. Journal, March 1817.)

Lastly, the latest writer on fever, though partial to the use of this medicine in that disease, admits that, "while the system continues under the influence of fever, ptyalism is not easily produced." (Armstrong on Typhus, p. 158.) And if such be the case in the comparatively mild and remediable fevers of this climate, some estimate may be formed of its total incompetency in so rapid and uncontrollable a disease as yellow fever during the inordinate actions of the first stage, the march of which can only be checked by depletion; and, in fine, when only the powers of medicine can be applied with

any well founded hope of success.

Mercury has been recommended as a prophylactic. On this point I do not profess to speak from experience. The rationale of the practice would seem to be grounded on the idea, that whatever cures, necessarily prevents;—an assumption, the fallacy of which I need not expose; for, even were the antecedent true (which I trust has been sufficiently disproved,) the consequent would be false. Strict temperance, and a gradual initiation of the system to those assimilatory changes which the organization of every person exposed to the influence of a tropical climate is destined to endure, will, I believe, be found to afford a more reasonable prospect of security (at least from violent attacks,) than the temporary change in the constitution which a saturation with mercury may create.

Witney, Oxfordshire, 2d July 1817.

Case of Recovery after the Separation and Discharge by Stool of a Portion of the Ileum. By ALEXANDER RENTON, Surgeon, Penicuik.

HAVE been induced, from the singular nature of the following case, to request its insertion in your Journal. I

am not aware that the annals of Surgery contain the like history of a similar affection. Cases indeed are recorded, wherein portions of the intestinal canal have spontaneously sphacelated, and been discharged by stool, and the process of digestion has still continued to go on; yet, so far as I know, the salutary efforts of nature in such cases have not been found to be permanent and complete; the patients sooner or later have sunk; and their existence seemed rather to prove, that it was possible that nature might survive for a time, than that she could eventually recover from, the partial destruction of so important a viscus. From a knowledge, therefore, of the unfortunate termination of these affections, I have been prevented communicating to you the history of this one, until I saw its ultimate result, by which I might be enabled to speak with more certainty of all the circumstances connected with it.

G. B. who is a mason by trade, went to his work at six o'clock on Saturday morning, July 6, 1816, in good health; and was suddenly seized in about an hour and a half afterwards with pyrosis, and pain in the left hypochrondrium, with a violent drawing in of his bowels, followed by a sensation, as if some portion of them was squeezed and constricted. Thinking to alleviate the severity of the pain, he ran immediately to stool, and procured a motion, without the relief he anticipated from it. He was carried to a neighbouring village, and, on his swallowing a glassful of spirits, vomiting, for the first time, commenced. There he was bathed in warm water, the pain continuing unabated. Through the course of the day, castor oil, at different times, was given him, which his stomach uniformly rejected. By his own desire he was taken home in a cart, a distance of nearly four miles. I saw him about ten o'clock in the evening. He was apparently in great distress; his body was bent upon his thighs; there was tension, increased heat, and pain of the abdomen, especially below the umbilicus, aggravated by pressure, and constant, though not always equally violent. He was restless in every posture; a profuse perspiration covered the surface of his body; his pulse was quick and strong, and he was frequently straining for a motion, but without effect.

I took twenty-four ounces of blood from his arm, and directed that he should be put immediately into a warm-bath, and that stimulating enemas be repeated every hour, with an ounce of castor oil, until some effect from his bowels be procured. I saw him next morning by eight o'clock, and found him much in the same state; his belly on the whole being more

generally tense, though the pain occupied a particular part of it, to which a bladder of hot water had constantly been kept applied. I bled him again to the same extent, and learnt that the castor oil he took through the night had been rejected, and that the injections had come away without effect. He was again put into the warm bath, and experienced in it the same temporary relief he received before. His stomach becoming more irritable, I ordered, in place of the castor oil, small doses of scammony, alternated with aloes and the injections, every two hours. At bedtime the warm bath was repeated, when he urgently cried for, and a large blister was applied to the abdomen. The medicines he took remained for a considerable time upon the stomach, probably by the stomach and duodenum being emptied of their contents by vomiting, and the feculent discharge not having yet commenced. On Monday morning he was again put into the warm bath, out of which he was taken in about ten minutes, in a state of syncope. During the latter part of the night, he began to reject large quantities of crude and indigested matter, which appeared from its smell and consistence to be the contents of the small intestines. When I asked him about the affected part of the belly, he laid his hand upon a spot from which he said all his distress proceeded. He has taken eighteen grains of scammony, and twelve common aloetic pills, some of which were found entire in what he had vomited. Instead of these purgatives, I recommended him to try the effects of Epsom salts, with the compound powder of jalap, in separate doses, and to assist their operation by a stimulating glyster in the evening. I saw him again at four in the afternoon, and was informed that all the medicines were vomited, and that the pain had not intermitted in violence. strength was now much exhausted, and a cold clammy sweat pervaded his body. With much difficulty he could turn himself in bed. He had frequent singultus; and when he was attacked with a violent spasm, his voice seemed to forsake him. In this very hopeless condition of our patient, I recommended to him a more powerful cathartic, and he was very willing to grasp at any proposal that afforded the slightest promise of relief. Accordingly, six grains of the mild muriate of mercury, with an ounce of the ol. ricini, were ordered to be taken every two hours, until I heard of their effects. seven, on Tuesday morning, he had taken seven doses of each of the medicines, and none of them had been rejected, when nearly eight pints of dark coloured bloody excrementitious matter were discharged by stool. He now felt much relieved,

the ease that followed the evacuation being almost as sudden as the pain in the commencement of the attack had been. The tension and pain of the abdomen subsided, and through the course of the day he had several copious stools, which were very fetid, and but slightly stained with blood. During the thirteen subsequent days, he continued free from any urgent symptom, excepting the occasional occurrence of spasms in the part originally affected, which seemed to proceed from costiveness, as they were alleviated by the exhibition of a glyster and castor oil. He had occasion to have recourse to the warm-bath twice only in that period, in order to mitigate a sudden attack of pain in the abdomen.

On the morning of the fourteenth day after the discharge, he became restless, and all the former symptoms relapsed in their most aggravated form. In this state he continued for three hours, racked with violent bearing down pain, by endeavouring, in straining, to expel something from his bowels,

that required all his efforts.

From this distressed state he was as speedily freed by the discharge of a portion of the ileum nearly eighteen inches in length. Worn out with pain, he fell immediately into a profound sleep for three hours. Since that time he has recovered gradually from the effects of his complaints, and has been for several months past at his usual employment. He is about forty-five years old, of a lank and relaxed habit, and strongly marked with all the symptoms of the leucophlegmatic temperament. Upon inquiring into some of the circumstances of his complaint, I was told by him, that he had been raising, on the morning of the attack, several heavy weights, and that he attributed the cause of it to the exertion he used.

The nature of the case, from the preceding detail, appears to be sufficiently obvious, and can in no other way be accounted for, than by supposing, that one portion of intestine had descended within another, had there become strangulated, and that the contiguous sides of the intestine, in the upper part, where the stricture existed, had united by the adhesive inflammation, while the included portion of it had been separated by the process, by which dead parts are removed from living surfaces.

A considerable part of mesentery was attached to the portion of ileum which was expelled; the division of the vessels of which may account for the flow of blood, that appeared only to an alarming extent in the first evacuation, and

which seemed indeed to consist principally of that fluid.

It is likewise evident, that the introsuscepted intestine must have been, at least, partially separated thirteen days before it was finally expelled, as he had, during that interval, a free discharge of excrement, without much difficulty or pain. Whether or not it may have remained in the large intestine, for any length of time after it was separated, becomes a question that does not seem to admit of ready explanation.

Among many symptoms that more particularly harassed him after he was free from the immediate danger of the attack, was a frequent craving or hunger, which was not gratified wholly by the taking of food. He was nourished for a long time upon the simplest and mildest diet; and it required no inconsiderable share of attention on his own part, to select those articles of food which he found by experience to agree best with him.

Upon taking animal food, or any other form of diet which disagreed with him, he could tell, with a good deal of precision, the time when he should be attacked with pain in consequence of it. This generally happened in about three hours afterwards.

Costiveness was likewise an effect of the complaint, which, unless obviated by the almost daily use of laxatives, never failed to reproduce an attack of pain, during the progress of his tedious recovery in the primary seat of the disease.

The only other fact worthy of record is, that, during his convalescence, his bowels remained for a long time in a very irritable state, so that wine and other cordials, recommended for his weakness, were obliged to be relinquished on account of their stimulating effects upon the intestines, and that, even yet, malt and diluted spirituous liquors are attended with similar consequences.

I have only to mention further, in concluding the history of this case, that the introsuscepted portion of ileum was given to Dr. Thomson, Professor of Surgery in Edinburgh, and, I believe, is now to be seen in the Museum of the Royal Col-

lege of Surgeons of that place. - Edin. Med. Journal.

Penicuik, August 6th 1817.

REVIEW.

Observations D'Accouchemens, Recueillies a la Salle des accouchées de l'Hôpital Civil de Strasbourg; par Jean-Frédéric Lobstein, Docteur en Médecine, Médecin-accoucheur en chef de l'hôpital civil de Strasbourg, &c. &c. &c.

Remarques de M. Jean-Frédéric Lobstein, Médecin-accoucheur en chef a l'hôpital civil de Strasbourg, sur la critique de ses observations d'accouchemens, insérée dans le Journal de Médecine, rédigé par M. Leroux, Mois du Novembre, 1816.

IN the course of nearly eleven years, one thousand and nine-L ty-eight women were admitted into the midwifery ward of the hospital of Strasbourg. Of these seven hundred and twelve were pregnant, and three hundred and eighty-six had been delivered. During this period, six hundred and thirty were delivered at the full time, sixty-seven prematurely; sixteen had abortions. One birth was delayed twenty days after the full time, and one infant was born with six incisor teeth. One woman was delivered of a male, at the fourth month. Six hundred and ninety-three had single children, nineteen were delivered of twins. Of the seven hundred and twelve labours. six hundred and sixty-two, were accomplished by the efforts of nature alone. Six hundred and thirty-four presented the vertex, eight the face, ten the feet, ten the breech. Of three hundred and ten natural labours, in which the relation between the head and pelvis, were very carefully examined, two hundred and eight were found with the occiput to the left acetabulum, seventy-three towards the right, four towards the pubis, twelve towards the right sacro-iliac symphysis, nine towards the left, one towards the promontory of the sacrum, two towards the right ilium, one towards the left.

In forty-nine cases artificial means were employed, viz. in twenty-three turning was necessary. In twenty the forceps

were applied. In three the Cæsarian section was performed after the death of the mother. In one this operation was performed through the vagina. Embryulcia was performed in two instances. Of the one thousand and ninety-eight labours, sixty-one were fatal, viz. eighteen by nervous fever, eleven by puerperal fever, two by malignant pleurisy; five by petechial fever, three by apoplexy, three by epilepsy, one by asthma, two by ascites, one by empyema, three by phthisis pulmonalis, one by venereal disease, two by colliquative diarrhæa, three by phlegmasia dolens, and two in consequence of exhaustion induced by laborious labour.

These details are followed in the observations, by others, containing statements of the comparative numbers of the male and female children born in the above period in the Strasbourg hospital; the number of deaths which occurred among them, and the diseases of which they died. A short topographical notice of the mid-wards is also given. To these succeed remarks on some interesting points of midwifery practice,

and a number of rare cases.

Dr. Lobstein begins by pointing out the circumstances which may render it difficult to ascertain precisely the presentation of the fœtal head. Among these he enumerates deviations from the natural structure of the fætal cranium. sutures and fontanels are our best guides, but these are not invariably the same in their arrangements, and may lead into error. The author has met with a supernumerary suture in the occipital bone. He has seen a head in which the left parietal bone was divided into an anterior and posterior portion by a tranverse suture. The bony structure is at times found to be developed so inconsiderably before but that large and numerous spaces are left between the bones which is merely covered by a membrane and integument. These spaces may be mistaken for the natural fontanels. Tumours are occasionally met with, situated either between bones at their sutures, or on the bones themselves. The hairy scalp is frequently swollen, especially when the head has been long delayed in the pelvis, and the efforts of the uterus at the same time have been powerful. The skin of the cranium is sometimes found preternaturally thickened. This is regarded by Dr. Lobstein as a congenite disease of this structure. Where it exists, neither the sutures, nor even the bones of the cranium can be felt, and thus the head may be mistaken for the face or the breech. The author considers that position the best, in which the head of the infant is so situated in the oblique diameter of the superior strait of the pelvis, that the

small fontanel corresponds to the left acetabulum, and the fore head to the right sacro-iliac symphysis. This however, does not correspond with the opinion of Smellie, Levret or Stein.

The author next treats of those labours in which the face presents. He remarks, that it is not long that these cases have been consigned to the efforts of nature alone. Many practitioners still recommend and practice turning in this presentation, and he has known one case of this kind in which turning was followed by the death of both mother and child. Levret recomends early turning. Baudelocque, although he acknowledges that many women are delivered when the face presents, without any assistance, still regards this presentation as unnatural, and as in itself requiring artificial assistance. Professor Boër of Vienna, appears to be the first who has reversed this doctrine. He publickly taught that in every variety of face presentation, delivery should be left to the unassisted efforts of nature. Following his example, says Dr. Lobstein, I have waited a tranquil spectator in face presentations, in which no untoward circumstances have appeared, and have seen a most happy termination of the case, where every thing seemed to threaten an unfavourable issue. A case is related of a woman both deformed and of small stature, who in the first presentation of the head, had been delivered at the hospital, after a long and laborious labour. This was her first child. In her second labour the face presented in the transverse diameter of the brim of the pelvis. The labour was more easy than the first; and her infant, born at the full time, equalling the first both in volume and weight.

The observations under review, were first published in the Journal de Médicine, edited by M. Leroux. The paper was soon followed by a very severe critique by M. le docteur Duchâreau, published in the same Journal. This was soon after followed by a reply from M. Lobstein, in the same work. The most offensive portions of the author's first paper, are his doctrine and treatment of face presentations and his mode of applying the forceps. It is evident from what has been said above, relative to the first point, that he considers face presentations as perfectly natural ones, and entirely within the compass of the natural powers of the uterus. It appears from what he says in his remarks on the critique, that he considers them as losing this designation only when the standard relations between the head and pelvis, let the cause be what if may, are wanting. After a careful examination of authors on this subject and after an elaborate critique on Baudelocque, Dr. Lobstein remarks, "I have thus shown that labours in Vol. VII.

which the face presents are, according to common language, perfectly natural, that when the pelvis and head are of standard dimensions, nothing prevents delivery, more especially if the longitudinal diameter of face is parallel to the transverse diameter of the pelvis; and farther, that the duty of the practitioner during the labour, is the same as in other natural labours, viz. merely to obviate whatever may interfere with its progress." The author's remarks on this subject are thus concluded. There are two principal opinions relative to face presentations. According to the first, these labours are essentially contrary to nature, and although some of them may be completed without artificial assistance, these cases only form an exception to the general rule. According to the second, they are in their character and essence natural labours, and if any of them have been experienced to be long and painful, these should be regarded as particular cases, which do not invalidate the general rule. Of this latter opinion, Dr.

Lobstein again declares himself the decided advocate.

The principal importance of any opinion in medicine, is the influence it may have upon practice. It is in this view almost entirely that the present discussion has any interest to us. For the mere purposes of nomenclature, the designation bestowed by Baudelocque on face presentations, hardly deserves a paragraph of attack or defence. It is very important, however, if the practitioner is taught by it, that preternatural presentations necessarily require artificial means. This however is hardly a warrantable inference, even from what Baudelocque has said on the subject. He does not deny that in some cases, though they may form an exception to his general rule, the child may be born in face presentations, by the sole efforts of nature. It is principally in view of the difficulties, and dangers which are ordinarily to be surmounted in these cases, that he says they seem to invite in every case, the use of artificial means for the safety of the mother and child. The opinions of Baudelocque and Lobstein may be thus in a measure reconciled, on the only important part of the question; whether these presentations are natural or not, can only be decided by reference to arbitrary definition. The decision however should have no relation to practice. The demand for artificial means to accomplish delivery, as a general rule, should be laid in the local and general effects of the labour, not in the presentation or the process itself. The exceptions to this rule, are those rare cases in which unassisted delivery is physically impossible. Lobstein's directions and practice rest principally on these considerations. He contends that

face presentations are natural, and should be managed as all other natural labours are. It is not that they are tedious merely, that they are to be assisted, for the uterine efforts may be feeble, and the soft parts of the pelvis suffer but little pressure. These efforts on the other hand may be vigorous, and though the advance of the head be slow, the necessary pressure is no greater than is ordinarily suffered. These are not cases for a precipitate employment of means, to hurry delivery.* The case becomes a legitimate object of artificial aid, when the precursory symptoms of local or general derangment manifest themselves, more especially will it be demanded, when such derangement has actually occurred. We have reference in what has been just said to the use of instruments in laborious labour. We however very much question the propriety of administering medicines which are reputed to possess a specific influence over the actions of the uterus, in this class of labours. Under the operation of such means, the powers of the uterus are augmented. The natural intervals between its contractions, are in a great measure prevented. It acts incessantly. The child is forced violently upon or through the natural passages, and the neighbouring parts suffer an unremitted pressure. If therefore the presentation be unfavourable to casy delivery, but still the labour advances, and the general condition of the female be good, we are not authorized to endeavour by internal remedies, to hurry the process. If artificial aid become necessary, we shall find, that as a general rule it may be best afforded by the judicious use of means whose operation we can perfectly control. There are unquestionably cases in which specifics, if there be such, may be employed, and to excite the uterus with advantage. It is not however, consistent with our present design to point them out. The above remarks are entirely out of place in this review, for the next article in the Observations, is entitled "The utility and efficacy of Borax."

The borate of soda is classed among the emenagogues. This article had formerly a high reputation in cases of protracted labour. An account of its virtues may be found in the Materia Medica of Læsecké, in the manual of phamacology of Gren, &c. &c. It had however fallen into oblivion, and has but lately been recalled into notice, in the Journal de Médecine Pratique de Hufeland. Dr. Lobstein relates six cases in which the borate was employed, and bears ample testimony in its favour. In the first case, the waters came away,

^{*} The destruction of the child under such circumstances is wholly unwarrantable.

three hours after the commencement of the labour, as this premature rupture of the membranes was likely to render the case long and fatiguing, the medicine was given, but not until the labour had continued a day. The orifice of the uterus at this time was found to be dilated to the size of a three sous piece. The feet presented. The contractions of the uterus, says the author, became stronger and more frequent after the use of the borate, and a dead female child was delivered. The second case, that of Catherine Conrad, commenced with faise pains. The os uteri remained closed and rigid, borax was given to the extent of eight grains every hour, and an opium ointment applied to the edges of the uterine orifice. A living child was born at the end of three hours after the use of these remedies.

The third case was a face presentation. It occupied the transverse diameter of the superior strait, the forehead being to the right ilium, the chin to the left. The labour had continued three hours, and the os uteri was dilated to the size of a three livre piece. The membranes were found broken, and the face (head) moveable. Powders containing seven grains of the borate of soda, with as much sugar, were now given. These were taken, and in three hours a living female child was delivered. Elizabeth Wissler is the fourth case. This was her third labour. The first had been laborious, the second required the forceps. In the one under notice the borax was given as above in quantity and times, and was instrumental according to the author in effecting the delivery of a living male child in three hours. Fifth case. Elizabeth Duvereny aged twenty-four, second child. The labour had continued three days, when the author saw her. The os uteri had begun to dilate, was soft, and easily dilatable. Five grains of the borate and sugar were given every half hour. The pains were increased in force and frequency after the second dose, and a living female child, with the umbilical cord about the neck was delivered. In the eighth case the labour was lingering, the os uteri somewhat rigid, no indication for bleeding existing, the borax was exibited. Four grains were given every half hour. The first dose vomited the patient, a short sleep followed. Upon waking, the powders were resumed and continued till seven were taken. The pains became stronger; the os uteri dilated; the membranes were ruptured by the practitioner, and delivery easily accomplished. Two other cases are mentioned of face presentations; as these agree exactly with the third: the author has not detailed them.

Such are the facts related by Dr. Lobstein in support of the beneficial uses of the borate of soda in some cases of parturition. We mention them at this time, rather for their novelty, than with a view to recommend this medicine to

the use of practitioners.

The next article in the observations is entitled, "Effects of mechanical irritation on the uterus." The facts mentioned under this head, must have been observed by every practitioner of midwifery. Nothing is more frequently deserved in obstetric practice than an increase in the force and frequency of the uterine contractions from mechanical irritation of the os uteri. The explanation which is offered by Dr. Lobstein, of the operation of the lever in laborious labour, though supported by Herbiniaux and Baudelocque, we are not disposed entirely to subscribe to.* It is undoubtedly true that the lever like the hand may excite the uterus to unusual contraction. But experience has not taught us, that it is by an operation of this kind, that it has entirely, or principally afforded its aid in laborious parturition. The fact however is interesting, that this instrument should have been observed so generally to rouse the uterus to great exertion, as to have led one of its strongest defenders, Harbiniaux, to attribute much of the benefits derived from it to this circumstance. One would almost have thought, that with these facts and his own observation, Dr. Lobstein would have preferred the lever in his lingering cases, to the uncontrollable and somewhat uncertain efforts of the borate of soda.

The next article entitled, General remarks on turning, and on the application of the forceps, contains a rule of practice, which is very severely animadverted on in the critique above referred to. It is as follows, "as to the manner of applying the forceps, I have frequently followed that of Saxtorph and Weidmann, although less natural than that of Baudelocque. It consists in always applying the forceps, in the same manner in relation to the pelvis, in the direction of its sides and axis, without any regard whatever to the position of the head of the fœtus. The author farther declares that he has never known any bad consequences follow, although the blades have not corresponded to the sides of the head. This practice is in direct opposition to that recommended by Baudelocque, which had been long in use before his time, and which has found nume-

^{*} He supposes this instrument principally operates in facilitating delivery, by mechanically irritating the mouth of the womb,

rous advocates in later writers. According to this rule the forceps should be applied only upon the sides of the fætal head, let the position of this last be what it may, in relation to the pelvis. Baudelocque pronounces the cases to be very rare, which may perhaps require a deviation from this rule. In the critique above referred to, M. Duchâteau not only passes a very severe censure on Dr. Lobstein for his deviation from Baudelocque, but attributes to what he regards as mal-practice, the unhappy issue of every case, in which the

mother or child were injured or died.

Notwithstanding Dr. Lobstein's avowed opposition to the supremacy of any school, or of any particular rule of practice, however distinguished its author, a question of this kind can only be decided by a reference to facts. And it is perfectly fair in such a case, to regard as good authority, the practitioner who has not only seen most, but has at the same time been most successful. Among the latest French writers on midwifery, who support the rule recommended by Baudelocque, is Maygrier. In his work entitled Nouveaux Elemens de la science et de l'art des accouchemens; published in 1817, this author admits but one case in which it may be necessary to depart from the given rule; this is when the head is detained in the superior strait of the pelvis, by its parietal diameter. Now it is obvious, that in this case the instrument can be applied in no other direction than over the face and occiput. Having been thus applied, and the head brought into the cavity of the pelvis, the blades are to be removed and then re-aplied over the sides of the head. The sole reason offered by the author for this manoeuvre is, that changing the instrument is less inconvenient to the mother, than a continual pressure over the face would be to the infant. Capuron who published in 1811, lays it down as indispensible that the forceps should be applied over the sides of the head. His argument is principally drawn from the shape of the instrument. Gardier who published in 1807, remarks that the form and dimensions of the instrument indicate sufficiently that the blades should be applied upon the sides of the head. The argument from shape or dimensions however cannot be regarded as conclusive against any other mode of applying the forceps, since in these circumstances, the instrument corresponds full as well to the shape and direction of the sides and axis of the pelvis as with the external form of the fœtal head.

Smellie directs that the forceps should be applied if possible over the ears. By this mode, the blades approximate to each other more nearly, and are less likely to injure the child; when otherwise placed, viz. over the face and occiput, the blades are separated widely from each other, take up more room, and they are more apt to injure the child or mother.

The arguments in support of Smellie's rule, adduced by its friends, are, that when the forceps is applied over the ears, the handles approach each other so nearly as to render their use very easy. Lobstein remarks on this, that the hand must be small indeed which cannot embrace the handles when separated eighteen lines, which he says is the extent of their sepation when applied in the direction of the longest diameter of the head. It is objected by the advocates of Smellie's rule, that the head cannot be so well embraced by the forehead and occiput, in as much as these two opposite points do not present to the blades a surface sufficiently extensive. This objection has no weight, says Dr. Lobstein, except in the very rare case of locked head, in which much force is required to move and extract the head; in ordinary cases the convexity of the forehead and occiput offer points of contact quite sufficient for using all the force that is necessary or safe. Other authorities for the above practice, are Chapman (Eng.) Menard Schlichting, Bing, de Winel, Burton, Johnson, Field. Van der Laer, Levret, Contonly, Orsborne and Denman. The object of Dr. Lobstein in bringing these forward is rather with a view to shew the ignorance of M. Duchâteau in relation to the antiquity of the rule to be followed in applying the forceps, than to support it by the authority of these respectable names.

Two questions of no small consequence are stated at p. 33, of the remarks. The first relates to the local injury the head and face may suffer from the application of the forceps in the direction of the transverse diameter of the cranium. The second, to the hazard of death from the compression of the brain, during the operation. Local injury may undoubtedly be the consequence of this mode of placing the forceps, According to Dr. Lobstein, however, this has been excessively exaggerated. The injury in general is little more than an ecchymosis, which ordinarily disappears in a few days; the eye has been spoken of as in peculiar danger of injury, Saxtorph has demonstrated from the structure of the orbit, that this objection is wholly unfounded. The second question regards the life of the child. It appears from the reasonings and facts, as stated by the author, relating to this question, that there is no necessary risk incurred of fœtal compression of the brain from this mode of applying the forceps. This he infers from the actual state of the brain under ordinary compression made by this instrument, and from his personal observation, in well marked cases; the remark applies equally well to the pressure of the brain in the oblique, or antero-posterior diameter of the head, "I have frequently, (says Dr. Lobstein,) seized the head in the direction of its oblique diameter, and I am able to declare, that I have never known

any bad consequence follow."

The first authority quoted by Dr. Lobstein in support of his practice in forceps cases is Saxtorph. This author informs us that having observed many evils to follow the common method of applying this instrument, viz. in all cases over the sides of the head, and having in many cases experienced a great deal of difficulty in so using them, he was led to adopt another method; he has since followed it for many years, without observing any ill effects to result either to the mother or child. In every situation of the head, when locked near the outlet of the pelvis, the forceps, if required, will be most safely and most easily applied, by introducing it in the direction of the sides of the pelvis, no regard whatever being had to the part to which the face is turned. And directly in opposition to Baudelocque, he further observes, that he never should advise a change in the position of the head for the purpose of accommodating it to the passages, by means of the forceps. The above method he considers as the most simple, and founds his regard for it in the success with which he has practised it. Richter and Weidmann are next quoted, and coincide exactly in opinion and practice with Lobstein and Saxtorph.

In looking back on this analysis, three subjects strike us as worthy a moments reconsideration. He first regards the opposite rules of practice recommended by Baudelocque and Lobstein, in face presentations. Both of these methods border very nearly on the extremes of practice in these cases. Under the influence of the one, delay may be carried to an injurious and fatal; extent under that of the other, artificial

means may be precipitately resorted to.

It will not be denied, notwithstanding these rules, that cases do occasionally occur, accompanied by no untoward circumstances, in which artificial means may be safely employed, and principally with a view to shorten and diminish the sufferings of the patient. These cases lie somewhere in the mean between what have been considered above the extremes of practice in these cases. Their true place however is perhaps nearer the rule of Lobstein than that of Baudelocque. There is but little danger, it is conceived, that these remarks will lead to an unjustifiable use of artificial means in laborious

parturition. They are not offered for the purpose of establishing a rule of practice. The cases to which they apply cannot be so precisely described, as to allow of fixing the rule. They are readily recognized by the experienced practitioner, and show, what has been principally aimed at, that in midwifery, as in general medicine, exclusive methods are far less valuable in practice, than well founded principles; and that he who submits himself or his patients exclusively to them, will fail to advance the science of his profession and in some cases expose those who confide in him, to unnecessary suffering, if

not to positive danger.

The remaining subject to be noticed regards the method recommended by Baudelocque and his followers, and that by Saxtorph, Lobstein and others, of applying the forceps. These are both of them, as general rules, exclusive in their nature. The exceptions made by Baudelocque, though they teach us that there are cases in which his method will not apply, still, as in all other similar instances, they tend to strengthen the rule. They are noticed again merely from the positive manner in which they are enforced, and from a belief that all exclusive methods in medicine are not only not favourable to the progress of this science, but of an absolutely dangerous ten-Their inferences are principally felt, and acknowledged, by the young practitioner, and it is but natural that he should hesitate how to act with the exclusive and opposite methods of very respectable authority before him. It must be confessed, however, that from the statements of these authors a great deal is not to be feared should either practice become universal, for according to both methods delivery may be safely effected with the forceps. Hence the weight of argument, for, and force of objection against either, may be resolved into the individual partiality of these authors for their own peculiar methods of practice. The ultimate tendency of exclusive rules in this case however, is precisely analogous to what have been considered the natural effects of the directly opposite and extreme practice of Lobstein, and Baudelocque, in face presentations.

Under uterine hæmorrhages, the author has mentioned a fact which deserves notice. This is the alternate contraction and relaxation of the uterus after delivery. He remarks that he has frequently met with cases of this kind, and in one he has known these contractions and relaxations occur six times in one hour. These facts derive their principal interest, from the hæmorrhage which almost necessarily accompanies the state of relaxation. One case is mentioned by Dr. Lobstein

which was well nigh fatal, notwithstanding his unremitting endeavours to check the hæmorrhage. Plugging the uterus and vagine is strongly recommended in these cases. The plug not only acts as a mechanical obstruction to the flow of blood from the vessels, but as a permanent stimulus, inducing a state of permanent contraction in the uterus. Would not a well adjusted pressure over the abdomen constitute an

useful part of treatment in these cases?

An extremely embarrassing case is related, in which the superior part of the uterus remained in a perfect state of relaxation which its inferior portion was firmly contracted. plug could not be introduced into the uterus, for its mouth would not admit the finger of the practitioner. The treatment consisted principally in the liberal use of cold water applied externally and internally. It was dashed from a height over the abdomen, and injected into the vagina and uterus, various astringents were also employed. The woman recovered. It is probable that in this case permanent compression of the abdomen would have been found an useful auxiliary to the means used. The observations contain a number of rare and interesting cases, and the work concludes with tables of all the obstetric cases, and of the diseases of women and children which occurred in the midwifery wards of the Strasbourg hospital, from the 22d of March 1804, to the 31st of December 1814.

Medico-Chirurgical Transactions, vol. viii. part I. 8vo. pp. 315. London, 1817. Longman and Co.

[From the London Medical Repository.]

HE exertions of the respectable Body which issues this half-yearly volume, continue unabated; and it is our duty to bring its labours before our readers. But, as the periods which intervene from the appearance of one Part to that of another, are so short, and the circle of their readers is now so much widened, we do not think it necessary to enter as minutely into the analysis of each paper, as has hitherto been our custom. The present Part contains thirteen articles; of which, eight are Surgical, two Pathological, and two only strictly connected with the Practice of Medicine. How tar this majority of communications can be regarded as a proof of the superior ardour of the surgeons, and the consequent improvement of surgery, we will not pretend to decide;

but it is at least highly creditable to that branch of the Profession.

The first of the pathological papers which we shall notice, is by Mr. Howship, and intitled, "Observations on the Morbid Structure of Bones, and an Attempt at an Arrangement of their Diseases." The previous and valuable inquiries of Mr. Howship, which are before the Profession, may be regarded as preparatory to that now under examination. He nevertheless modestly doubts his adequacy for this part of his task, in which so little aid can be obtained from books; for with the exception of Mr. Hunter, who had studied it profoundly, scarcely any physiologist has written professedly upon the subject. The previous inquiries, however, of Mr. Howship, his knowledge of the use of the microscope, and the advantage he enjoys of having recourse to Mr. Heaviside's very "valuable and extensive". collection of diseased bones, have afforded him great facilities in the prosecution of his investigation, and enabled him to overcome most of the obstacles which presented themselves.

The circumstance of the existence of a membranous expansion within the medullary cavities of the large bones, was pointed out by Havers and some other anatomists; and from having occasionally seen small arteries entering the substance of bones, they were led to infer a vascular structure in these organs; but our author justly conceives, that "the existence, vascularity, and functions of the membranous sheaths, within even the smallest tubes and canals contained in bone," was

first demonstrated by himself.

"The small space," he remarks, "occupied by the blood-vessels of the canals, compared with that which is found to be allotted to the secretions and membranes of these cavities, distinctly prove, that the circulation must, under all circumstances, enjoy as much freedom here as elsewhere; and the intimate connexion formed by these canals between all parts of the bones and the surrounding soft parts, affords the strongest ground for believing, that the minute vascular and membranous organization of the bones is as suceptible of impressions from irritation, or sympathy, as the muscular, glandular or other soft structures of the fabric."—p. 62.

He maintains, that the same laws which regulate the progress of irritation or inflammation in membranous parts, regulate and direct also "the sphere of irritation in the diseases of bones." He dissents from the opinion held by some writers, that "an effusion of purulent matter upon the bone, operates by dissolving the ossific structure;" and assumes it as

a point upon which many of his observations rest,

"that in every case in which bone is acted upon, the soft solids have been in close contact with it, that consequently the sections of all the minute cavities must give an accurate outline of the external figure of the contents, and that whenever bone is removed it happens through the immediate agency of absorption."—p. 65.

From remarking also that the minute longitudinal canals become uniformly larger in some diseases of bones, whilst sometimes they retain their smooth polished surface, and sometimes become rough and uneven, he has been led to the dis-

covery of the singular fact,

"that under the influence of some diseases, the membranes of these canals become absorbing surfaces without losing their naturally smooth even texture, while in others they not only become thicker and more vascular, but take on a granulated structure externally, where the surface of absorption acts

upon the surrounding bone."-p. 65.

He does not, however, conceive, that absorbents exist in the minute longitudinal canals in bone, the mean diameter of which does not exceed $\frac{1}{200}$ th part of an inch; but concludes, that "the minute branches of the veins are in these minute canals appointed to perform the office, and conduct the function of absorption. With regard to the mode in which the condition of bone is changed to admit of its absorption, he

ventures to suggest the following opinion:

"My own opinion is, that in every instance where bone is absorbed, the process is commenced by the agency of some power exerting itself in the blood circulated over the part, by which the state of the animal principle is changed, and the particles of earth let loose, so as to be ready for removal by absorption; and although we yet know very little upon the subject, I think I shall be able to demonstrate that the interstitial absorption of bone takes place by the different modifications of action of the same vessels, and the same membranous sheaths. There is the slow absorption incident to growth and health; and that which occurs in connexion with healthy inflammation of bone; besides the absorption that takes place during the existence of venereal complaints, and the use of mercury; and many others.

"It is presumable that the extremely minute circumstance which has been demonstrated to exist in the interstitial parts of bone, may, like the other systems connected with the machine, be capable of varying and modifying the actions of its vessels in a manner peculiar to itself; and that dependent on the variations of action in the blood-vessels, will be the

particular affinities, at one time favoured, and at another retarded. It also seems to me extremely probable that the galvanic influence, which in some late experiments has been found to exert a power as curious as unexpected, in arranging and separating the elementary constituents of animal fluids, is evolved in the blood, by the action of the vessels upon their contents; and that the particular arrangement of the vessels regulates the resistance and motion of the blood, in such a manner, as may best insure the evolution of the precise measure of animal electricity, that is required for the production and disposition of the new combinations."—p. 69.

There is too much fancy in the above explanation to produce a conviction of its probability on our minds; at the same time we must confess, that any opinion we have formed on

the subject is not better founded.

Having premised these general remarks, our author proceeds to the consideration of the diseases of bones; and, for the sake of method, has attempted an arrangement of them "according to the more obvious characters of each affection," under the nine following divisions:

"1. Alteration of external figure, not arising from general swelling, but most commonly from a deposit of newly

formed ossific matter, upon the surface of the bone."

This division includes nodes, exostoses, the appearances produced by the formation of new joints, the ossification subsequent to necrosis, and the callous thrown out in fractures.

"2. Enlargement, from swelling of the original substance of the bone."

Under which are arranged the appearances produced by

spina ventosa.

"3. Enlargement of bone, connected with an increased interstitial deposit of ossific matter, producing a more dense and compact texture than natural, as happens in healthy

ossific inflammation.

"4. Enlargement more or less perceptible, with a disposition to absorption and disorganization of bone, either operating from the internal or medullary cavity, when the parts of the bone are progressively separated and absorbed; or acting upon the external surface, when a succession of superficial exfoliations are thrown off.

"5. Absorption, without enlargement; a consequence of peculiar excitement, more or less diffused through the general structure of the large bones, tending to weaken their sides, and render them liable to fracture from slight causes.

"6. Change in the figure of adult bone, from absorption removing in succession the more internal parts of the structure, weakening the general fabric, and rendering it by degrees incapable of supporting the weight of the body, or the action of the muscles."—p. 72—7.

Under this division are placed the appearances produced

by mollities ossium.

"7. Partial death, or necrosis of bone; sometimes the result of inflammation and abscess within the bone, but most frequently the consequence of disease in the soft parts covering it.

"8. Change in the figure of growing bone; dependent upon the more or less perfect removal of the phosphate of lime from the ossific texture, the organization of the bone

in other respects being unaltered.

"9. Loss of firmness, with absorption and disorganization of bone; induced by a depraved state of constitution, in some instances nearly allied to scurvy, and connected with decomposition of the gelatin of the ossific structure."—p. 78—9.

In the present paper, Mr. Howship has confined his observations to the first of these divisions; under which, he has placed appearances resulting from a specific disease, as the venereal; those depending on purely local action, excited, for example, by external violence; and those produced by the deposition of ossific matter, "as the natural means of re-

pairing injuries of various kinds."

The first of these appearances, "partial swelling of the external surface of bone," seems to our author to be "the result of some external cause; applied either in the form of pressure or bruise." The state both of the periosteum and of the membranes of the bony canals, is not that of health, yet not very different from it, and is perfectly local. In some instances, however, "the whole substance of one side of the cylinder of a bone is affected;" but the structure of the tumour thus produced "differs in no respect from that of healthy bone." In some cases, the alteration is "the result of a gradually increased secretion of medullary matter into the longitudinal canals;" in others, it is "the consequence of an increased secretion of ossific matter; which, however, is still deposited as in health."

The engravings of the specimens of these affections, selected by Mr. Howship to illustrate his description, are well executed and extremely satisfactory. As an instance of the secretion into the medullary space, he describes a part of the

cranium of a man who had been insane for many years, which

is preserved in Mr. Heaviside's museum.

"The left parietal bone is raised up into an unequal tumor externally, consequent to an increased secretion of ossific matter into the medullary space, or diploe, between the two tables of the skull. The distance between the separated tables of the cranium, at the thickest part of the tumor, is about an inch; the basis covering an extent equal to about four inches. The natural figure of the cavity of the cranium remains unal-

tered."-p. 60.

Mr. Thomson, one of the Editors of the Repository, in a recent visit to Paris, saw a similar instance in a fresh skull in the dissecting saloon of the Hospital de la Charité. The individual, who died in the hospital, was not known to have ever been insane, nor to have had any particular affection of the head; but Mr. Thompson could not learn the history of the disease of which he had died. On sawing through the skull-cap at the vertex, in a direction parallel to the coronal suture, the right parietal bone was found to be thickened so as to form an irregular tumor externally; the thickest part of which exceeded an inch, whilst the cavity of the cranium was perfectly natural. The bony deposit had been apparently made into the diploe, which, however, was nearly obliterated; whilst the thickened portion had the aspect of the most healthy bone.* The left parietal bone was also elevated in a similar manner; but in a much inferior degree.

On the subject of "the ossific action of the vessels of the periosteum producing nodes of exostoses," our author brings before his readers the examination of two kinds of structure. The one, "a circumscribed scale or lamina of bone upon the natural surface," resulting from an inflamed state of periosteum; the other, attended with thickening of the periosteum and the effect of a more or less diseased state of the membrane, "which, continuing to increase in volume during the progress of the disorder, assumes new characters, determining the kind and quantity of the ossific secretion, conformably to the age and constitution of the patient." This ossific secretion takes place upon the undisturbed surface of originally formed bone, and in some instances the deposit is not "immediately upon the original surface," but into the texture of the periosteum, a

^{*} This skull was examined chiefly as affording an admirable illustration of the fallacy of Drs. Gall and Spurzheim's phsyognomical hypothesis; the external form of the skull displaying an extraordinary development of the organs of *Hope* and *Conscientiousness* without any corresponding elebral enlargement.

very fine lamina of which is interposed between the original bone and the new formation. Our author has given a good microscopic representation of a specimen of this kind of de-

posit.

In the formation of exostoses, "the measure of irritability of the system" regulates the consequences of the disease and the pain attending it: and our author has brought forward sufficient examples to prove, that the disease is in the periosteum; and the spongy mass, however large, is completely separable from the bone round which it forms. In one specimen of the disease which he minutely examined, he found, that the structure "of the various ossific masses" of which the tumour was composed, was "finely laminated or fibrous, proceeding in a divergent course from the central part of the disease." He supposes "the first deposition of the ossific matter took place in the form of small irregular masses," which were afterwards rendered foliated by the operation of the soft parts of the disease. A good engraving is given of the disease; and from the manner in which Mr. Howship has treated his first division of his subject, we anxiously look for the sequel of his labours.

The next paper, according to our arrangement, is the History of a Case of Rupture of the Brain and its Membranes, arising from the accumulation of Fluid in a case of

Hydrocephalus Internus." By John Baron, M.D.

This was a case of congenital disease, and the head, when the child was brought to Dr. Baron, measured twenty-eight inches in circumference. It, however, became again smaller after a tumour on the top of the head, the size of a goose's egg, appeared, accompanied with an increased flow from the urinary organs, and it went on decreasing while this flow continued; but when it stopped, the head again rapidly enlarg-When the rupture took place, "a watery discharge tinged with blood was seen to ooze from the nostrils and mouth;" and this continuing to the last, the head, which was diminished by it, never again acquired its original magnitude. It was remarkable, that when this oozing was by any circumstance diminished, the urinary discharge increased in a corresponding degree. The intellectual faculties were not much developed, and the child never "made the slightest attempt to articulate." At the death of the patient, the head was nine inches less in circumference than it was before the swelling on the top appeared. The following were the appearances on dissection :--

"A little to the right side of the falx the dura mater was ruptured, as was demonstrated by a well defined circular opening nearly one inch in diameter, which communicated directly with what was the external tumour and the interior of the brain. Through this opening I evacuated between three and four pints of fluid, which was contained in a bag formed by both hemispheres of the brain. The expansion of the brain was so great, that round the margin of the opening of the dura mater, it did not equal the thickness of a shilling; and under the opening it had entirely disappeared, proving that it had given way when the dura mater yielded, and allowed the fluid from the internal cavity to escape into the outward swelling.

"The cerebellum was entire, and the organs of the different nerves seemed unimpaired. I could not well examine the æthmoid bone, but I easily passed a probe through it into the

nose."-p. 54.

The first of the Surgical Papers, is, "A Report of the State of the Wounded on Board His Majesty's Ship, Leander, in the Action before Algiers, extracted from a Letter from D. Quarrier, M.D., Surgeon to the Leander." only circumstance of importance in this paper, is the proof which it affords of the advantage of immediate amputation without waiting for reaction. The horrors of the scene, which were awful, are well and feelingly described; yet, amidst these, Dr. Quarrier could not perceive any of that "dreadful perturbation and constitutional shock—that peculiar derangement of the sensorium" which has been so frequently described by authors, as constantly attending wounds inflicted by large cannon shot. Dr. Quarrier justly blames the indiscriminate use of the tourniquet in gunshot wounds; which, he says, is seldom required, "excepting in operating;" and we would add, that even in operating it is now very generally laid aside; few cases occurring in which, if an assistant can be depended upon, its aid is essentially requisite.

Several interesting "Cases of Hernia Cerebri, with Observations," by Edward Stanley, Esq. form the subject of the second of this class of papers. The principal object in this paper, is to determine the cause of those protrusions of the brain which have received the denomination of hernia cerebri. Mr. Stanley conceives, that in every case there is either distension of the vessels or serious effusion: and the question necessarily suggests itself, whether the surgeon ought immediately to remove the protrusion, "or whether he will

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await the event of the natural processes which it is likely will, at some period, be commenced for getting rid of the protruded brain, and restoration of the injured parts?" Mr. Stanley confesses himself incapable of determining which is the best plan of treatment. Another question, also, naturally presents itself: "whether, in the individuals who have recovered after the loss of a part of the brain, there is any regeneration of the cerebral substance?" The only facts known to our author, illustrative of this question, are deduced from the experiments of Strueman, from which it appears, that "a new substance, of a yellow colour, thinner and softer than the genuine brain," arises from the exposed surface, "and at the same time there remains an accumulation of fluid in the ventricles." The cases communicated in this paper, are perspicuously described; and a satisfactory plate is given to illustrate the nature of the protrusion in one of them.

The third of the Surgical Papers is "The History of a Case of Ill-conditioned Ulcer of the Tongue, successfully treated," by Charles Lane, Esq. The arsenic in this case was administered internally, and also applied to the ulcer of the tongue; but the most remarkable circumstance in the communication, is the large dose of the solution, ten minims, equal to twelve ordinary drops, which was at first prescribed; and the extent it was carried to, viz. to seventeen minims, re-

peated every eight hours.

The fourth case is the "History of a Case of Lithotomy, with a few Remarks on the best Mode of Making the Incision in the Lateral Operation," by SAMUEL COOPER, Esq. After describing a case on which the author operated with a common dissecting scalpel, without a staff or director, he enters into an examination of the operation as it is usually performed. He recommends an ample division of the integuments, and points out the advantages "of making the incision through the whole of the parts cut in lithotomy, in a straight, regular, direct manner, from the surface of the skin in the perineum, to the termination of the wound in the urethra and This affords the greatest space for the extraction of the stone, and averts the evils to be dreaded from the repeated introduction of the forceps; it insures the safety of the asteria pudica profunda; prevents the rectum from being wounded; and places the seminal duct also altogether out of danger. The unparalelled success of Frere Jacques, Cheselden, Côsme, and some others, he ascribes altogether to their constant plan of making "a free incision into the bladder;" and criticises severely the advice which Scarpa has lately given in his Memoir on the Cutting Gorget of Hawkins. He makes some rational objections to the use of the gorget; and, in every instance, prefers the common scalpel or the beaked knife.

A Case of a Fatal Hamorrhage from the Extraction of a Tooth, by RICHARD BLAGDEN, Esq. constitutes the fifth surgical communication. There was a peculiar predisposition to hamorrhage in the patient, who had nearly lost his life, when a boy, from a similar operation to that described in this paper. The case contains no useful practical information, and is therefore only an unprofitable addition to the numerous cases of a similar description already on record. The carotid

was tied, without producing the expected benefit.

The sixth paper is the "Account of a Case where a severe Nervous Affection came on after a Punctured Wound of the Finger, and in which Amputation was successfully performed," by James Wardroff, Esq. In his remarks on this case, in which the relief after the amputation was instantaneous and permanent, the author endeavours to demonstrate the little reliance which is to be placed on a simple division of a nerve, when it is wounded, and the propriety of amputating the limb in all cases of partially divided nerves, when it is "followed by an affection of the nervous system in general."

The paper following the above, is "An Account of some remarkable Symptoms which were connected with a Painful Affection of the Extremity of the Left Thumb, together with the Mode of Treatment," by John Pearson, Esq., F.R.S., &c. This extraordinary morbid affection of the left thumb, which commenced with acute pain, resembling that of a whitlow, and local inflammation, gradually extended its influence, not only to the arm of the originally affected side, but to the other arm; and ultimately to the lower extremities; and rendered the patient, who was a woman of quality, incapable of using exercise for more than a few minutes at any one time. The patient, who was in Scotland at this period, tried a great variety of means, and particularly both the shower bath and immersion in the sea, without any permanent benefit. was brought to London, and became Mr. Pearson's patient. On considering the case, and the general state of health of the lady, Mr. Pearson conceived the opinion, that the symptoms "were immediately connected with a morbid condition of the nerves distributed to the extremity of the thumb." The mode of cure adopted, and which proved successful, was the producing an artificial exanthematose affection by means of the following liniment:

R Olei Olivæ, žiiss.

— Terebinthinæ, žiss.

Acidi Sulphurici, zi.—M.

This was rubbed on the left arm; but half a drachm more of the acid was added before it fairly produced its effect, which

it did after being used for twelve days.

"The whole arm, from the shoulder to the hand, was red, heated, tumid, and very painful. These symptoms became gradually more intense, and were diffused more extensively, increasing progressively during five days. Within this period, a number of small vesicles containing a pellucid fluid appeared on various parts of the arm; the face became swollen as in the acute erysipelas, and vesicles were distributed on different parts of its surface; the cellular membrane of the eyelids was likewise so much distended as to obstruct vision completely. The whole surface of the body, indeed, partook of these morbid appearances; but the vesicles were scattered very sparingly over the trunk and lower extremities."—p. 260.

On the fifth day after the cutaneous disease appeared, the thumb was agitated by a spontaneous motion, unattended with pain, and the morbid sensibility completely abated. The other symptoms also successively yielded; and, in little more than two months, "all appearance of the disease had

vanished."

The paper concludes with some excellent physiological and

pathological remarks connected with the subject.

The last of the Surgical Communications is a detail of some Cases of Fungus Hæmatodes, with Observations; by George Langstaff, Esq.; and an Appendix, containing Two Cases of Analogous Affections, by William Lawrence, Esq. F.R.S. This is, in every respect, a valuable communication; but it does not admit of analysis, in the brief manner to which we have confined ourselves, in noticing the various articles contained in this part of these Transactions.

The papers on the Practice of Medicine are two only in number. The first, which is the fifth of the volume, is intitled An Inquiry into the Origin and Nature of the Yellow Fever, as it has lately appeared in the West Indies, with Official Documents relating to the subject; by Will-

LIAM FERGUSON, M.D.

If any doubts remain of the non-contagious character of yellow fever, the facts brought forward in this paper are, in our opinion, sufficient to dispel them in unprejudiced minds. The instance of the Regalia transport, which has been so much

insisted upon as affording proofs of the contagious nature of the disease, by the contagionists, is fully discussed by Dr. Ferguson, and demonstrated, in a manner perfectly satisfactory to our minds, to have originated from some "green wood laid in at Sierra Leone, operating along with the foul ballast, to furnish, when impregnated with the gases arising from putrid sea-water, morbific matters, similar to those that, on land, arise from marshes when exposed to the influence of the higher degrees of atmospherical heat."

In pursuing the subject generally, Dr. Ferguson gives it as his decided opinion, that "the pestiferous quality" of marsh miasmata "does not necessarily depend either upon aqueous or vegetable putrefaction, however frequently it may be found combined with both." It is generally destroyed by the presence of much water, and never proceeds from the bodies of pools or lakes, but always from their margins, where there is

a paucity of water short of actual dryness.

"I think we may be able to explain," says Dr. Ferguson, from the various compositions of soil, its elevation, aspect, and texture, as affording capacity to retain moisture, why every dry one can be brought during an uncommonly wet season, through the influence of tropical heat, into the state of a marsh that gives out noxious vapours, and a marshy one approaching to dryness through previous draught may be made perfectly healthy from the same abundant rains."—p. 130.

After explaining the character of several of the West India islands in regard to these points, and the effects of their various climates on Europeans, our author offers the following, as points altogether unaffected by the conjectures connected,

otherwise, with the investigation of yellow fever.

"1st. That the yellow fever never begins, and cannot continue to exist in a temperature of heat lower than the ordinary temperature of the tropics, on the level of the sea; which temperature is not the ordinary one of agues, however moist the soil may be, but of remittents and the higher degrees of ardent fever.

"2nd. That even within the tropics, it is confined in all the islands to the sea-coast; and can only spread into the interior of continents where the country is flat and low, possessing little elevation above that level, and retaining the above temperature.

"3d. That it uniformly is more apt to arise and to spread where miasmata, or what would constitute the elements of intermittent or remittent fevers in colder countries, openly

abound.

"4th. That a comparatively high degree of bodily vigour and rigidity of fibre, such as the young sanguineous newly arrived European ordinarily brings with him to the West Indies, is for the most part essential to the development of the disease.

"5th. That Europeans suffer in point of priority and severity of attack, precisely in the degree that they possess the foresaid vigour of constitution, and that when relaxed by long residence or other causes, they become like the Creoles and people of colour, in a great degree exempt from its influence."—p. 138.

The whole paper is written in a masterly manner, and the proofs are as conclusive as the nature of the subject can

admit.

The other medical communication is from the pen of Dr. H. Scott, "On the Internal and External Use of the Nitro-Muriatic Acid in the Cure of Diseases; but as this is a subject still under investigation, and as we shall have frequent opportunities both of examining the value of the practice and the theoretical opinions of Dr. Scott, we forbear at present from entering upon its details.

The last paper of the volume which we have to notice, and which does not strictly come under any of the divisions of our arrangement, contains an account of a "Rupture of the Stomach and escape of its contents into the Abdomen," by John Crampton M.D. &c. with additional Observations by

BENJAMIN TRAVERS, Esq. F.R.S.

No prognosis could be formed from the symptoms, and hence the treatment consisted of means adapted to allay irritation and pain; but on opening the stomach after death, the cause of the sufferings became evident. "The perforation of the stomach was perfectly circular, about the size of a pea, and appeared to be the result of an ulcer on the mucous surface, which had gradually penetrated the other coats. This ulcer was hollow and circular, nearly the size of a shilling, and had the appearance as if it had been made with caustic, with the orifice in its centre." Such cases are curious, but not very useful, as they set Art wholly at defiance.

In concluding the brief notices we have taken of the contents of this part of these Transactions, we only regret we can remark, that, with a few exceptions, the communications are not of equal interest with those in the preceding vol-

umes.

An Essay on the Chemical History and Medical Treatment of Calculous Disorders. By ALEXANDER MARCET, M. D. F.R.S. &c. &c. 8vo. pp. 118, and 10 plates. London, 1817. Longman and Co.

[From the London Medical Repository.]

IT is truly gratifying to contemplate the change of opinion which the last twenty years have produced with respect to the importance of Chemical Science as a collateral branch of medical education. It is now generally and minutely studied; and the pathologist willingly admits, that chemistry, in aiding his labours, has, like irrigation, fertilized a soil, which, if hitherto unproductive, was so only from the deficiency of knowledge in the cultivators to draw forth its riches. In no part of medical science, however, has the influence of chemistry been more conspicuously displayed, than in the light it has thrown upon the nature of calculi, and the consequent improvements which have resulted in the treatment of calculous disorders. Hence the great value of every work that can render this species of knowledge more familiar to the practitioner; a fact which must plead our apology for bringing before our readers this volume so immediately after its publication, while many interesting works of prior date still remain unexamined.

The object of Doctor Marcet's Essay, to employ his own language "is to describe and illustrate, by means of accurate engravings, the characters by which the different calculi may be distinguished; to indicate the easiest analytical methods by which their chemical nature may be ascertained; and to point out the modes of medical treatment which afford the best prospect of success." In fulfilling these intentions, he has divided his subject into eight chapters; and although each of these may be regarded as in some degree a distinct essay, yet, by the judicious arrangement he has adopted, every one seems a necessary link in the chain of information, which the whole is calculated to complete.

In the first chapter, which treats "of the different situations in-which calculi are found in the urinary passages, and of the symptoms which they respectively produce," our author sets out with assuming the position, that as these concretions occur "independent of any specific agency of the urinary organs themselves," they "are liable to form in any of the cavities to which the urine has access;" but at the same time the particular form of some of these parts, and other circumstances

either natural or morbid, facilitate in them the deposition of calculous matter. Thus in the kidney, from the peculiar structure of the organ, producing "a kind of double filtration of the urine, which is highly favourable to the deposition of an undissolved calculous matter," concretions are frequently formed. Our author has exemplified this fact by two engravings of kidneys from the collection of Mr. Abernethy; in one of which the pelvis is greatly enlarged and distended with separate calculi closely pressed against each other, and in the other the concretion is a single mass moulded exactly to the form of the cavity, greatly distended, however, with all its ramifications. In both, the texture of the gland is much altered. In cases of this nature, the secretion is carried on by the other kidney; but occasionally, as Dr. Marcet remarks, "both kidneys are diseased to a most remarkable extent, and yet life is preserved for a considerable time." When the kidney is thus distended, the concretions usually extend into the superior part of the ureters, expanding it into a kind of pouch, while the coats of the tube below it are considerably thickened. We are rather surprised that our author has not mentioned the total obliteration of the canal of the ureters, which now and then takes place when the pelvis of the kidney is filled with calculous matter, two cases of which have come under our own observation. He notices, however, a circumstance of rare occurrence, that concretions may form in the duct itself; and states that he has seen "an instance in which the internal membrane of the ureters was lined with a calculous concretion."

The situation of calculi in the bladder is illustrated by two engravings; in one of which the stone, as in the majority of cases, lies free in the viscus, the coats of which are much thickened and contracted round it; while, in the other, "several calculi are seen enveloped and fixed in distinct cysts or rugæ, formed in the substance of the bladder." He mentions an instance of a single stone being incysted in this manner which weighed 3088 grains; and yet the patient "never had the usual diagnostic symptoms of the stone, namely, sudden stoppage of urine, pain in the glans penis, &c. and he had never consented to be sounded." The stone was found after his death, and consisted of two distinct masses of lithic acid, cemented together "by an intervening layer of crystalline triple phosphate." The manner in which small calculi are occasionally impacted in the urethra is also illustrated by an engraving from a preparation of Mr. Abernethy. The stone is spheroidal, and the coats of the canal are very much thickened, particularly round the place where it is fixed. This

case, adds our author, "is the more instructive as the stone was first mistaken for a stricture, and an attempt was actually made to destroy it by the caustic." The representation of another preparation from the collection of the same gentleman serves to exemplify the formation of calculi in the prostate gland, when these were found embedded in its substance; and the manner in which they form a cyst in the lobes is also

displayed.

The symptoms attending the presence of calculi in the different situations we have noticed, are next briefly described by Dr. Marcet. Among those diagnostic of stone in the kidney, he has overlooked one of the most striking, and which is so much the more necessary to be mentioned, as it is not observed to occur in mere inflammation of the kidneys when no calculus is present. We refer to the dark appearance of the urine, as if it were mixed with coffee grounds, evidently depending on broken down particles of blood, proceeding from the obscure but continued irritation of the kidney. When this occurs, in conjunction with a dull heavy pain in the loins, there can be very little doubt of the presence of calculus in the kidney. Our author justly remarks, that a decisive diagnostic symptom of the presence of calculi in the prostate gland "is still wanting." He notices a case which came under the observation of Mr. Astley Cooper, "in which this pathological point was clearly decided by manual examination. A sensation of grating at the neck of the bladder was perceived on passing a catheter, "and the finger being introduced into the rectum, some calculi could be felt moving in a cyst within the prostate;" an operation was proposed, but objected to by the patient, who died a few years afterwards, when the prostate was found to contain a number of calculi.

The second chapter, which treats "of the different prevalence of urinary calculi in various districts and hospitals, and of the comparative frequency of the disease in different countries," contains some curious and interesting matter; but we must lament with our author, that this account is much less complete than might have been expected, owing to no regular, or at least ostensible, records of the cases of lithotomy "being preserved in many hospitals, and particularly in the largest hospitals of London, St. Bartholomew's, St. Thomas's, Guy's, and the London hospital." The only place from which a very accurate statement was procured by him was the Norwich hospital, in which a regular register of the operations has been kept, and the calculi extracted preserved, for forty-Vol. VII.

four years. To this collection of our author had access, and was furnished with an abstract of the records annexed to the calculi, from the details of which the following table was constructed.

Returns of the Cases of Lithotomy in the Norfolk and Norwich Hospital, from 1772 to 1816; making a period of 44 years.

	Number of Operations.			Deaths.		
	Children under 14.	Adults.	Total.	Children.	Adults.	Total.
Males Females	227	251 20	-47 8 2 8	12	56 1	68 2
	235	271	506	13	57	70

"It appears from the above table, that the mean annual number of cases of lithotomy in the Norwich Hospital, during the last forty-four years, has been 11½, or 23 in every two years; and that the total number of fatal cases, in the 506 operations, is 70, a proportion of deaths corresponding to 1 in 7½, or 4 in 29. It appears also that the proportion of females undergoing the operation, is to that of males as 58 to 1000, or about 1 to 17; and that the mortality from the operation in children is only about 1 in 18; while in adults, it is 4 in 19,

that is nearly quadruple."-p. 25.

He has given, also, a tabular view of the comparative prevalence of the disorder, at different periods, in the same hospital, which we do not extract, as the variations of the number of operations of lithotomy in any hospital depend on very different causes, altogether independent of the prevalence of the disease; and, notwithstanding the average proportion of operations of lithotomy in that hospital, corresponding to the total number of patients admitted, is as one in thirty-eight; a proportion greatly exceeding that in any other public institution, the records of which, Dr. Marcet had access; yet, we think there are scarcely grounds for concluding, that this circumstance can be "traced to any peculiarities in the habits or situation of that district."

In St. Thomas's Hospital, in Cheselden's time, the proportion which the operations of lithotomy held to the total of patients admitted, appears to have been nearly as one for

every 268 patients; while in the last ten years, according to a statement furnished by Mr. Travers, it has not exceeded one for every 528 patients: but this difference perhaps may be accounted for from the extraordinary reputation of Cheselden in this operation. In St. Bartholomew's Hospital for the last five years, as Mr. Lawrence has endeavoured to ascertain, the annual average has been about "eleven cases of lithotomy, or one case in each [every] 340 patients;" and in Guy's, although the statement is merely guessed at, the average may, perhaps, "be considered as one in about 300 patients." From these data, our author conceives he is authorized in concluding that lithotomy is less frequent in London than formerly; a fact that we think depends less on any change in the diet and habits of the people, than in "the circumstance of calculous patients not resorting so exclusively, as was formerly the case, to the great London hospitals for the operation." This, in our opinion, arises in some degree from the more general establishment of county hospitals; but also in part from the superior attainments of young surgeons of the present day, enabling them more readily to operate in

In the Edinburgh Infirmary, the average of the operations for the last six years has not exceeded two in the year, although the annual number of patients is about 2000; in Paris, in l'Hopital de la Charité, the annual average is from ten to twelve, the admissions being from 2500 to 2600; in l'Hopital des Enfans Maladies, where 8000 children under the age of fifteen are annually admitted, the average is about six. In an hospital at Clermont Ferand in France, in which the annual admissions are 2000, the average of stone cases for the last twelve years has been six; and at Rouen, out of 7300. patients "during the last eighteen months, twelve have been operated on." From Vienna no returns were obtained; and very few cases of the operation occur there, owing to a prejudice existing against it: at Geneva, in a population of 30,000 souls, lithotomy has been performed thirteen times only in the last twenty years, and seven of the thirteen patients were not strictly Genevese; while at Lyons, which is eighty miles only from Geneva, "the disease is stated to be rather frequent."

The Norwich table might be supposed to confirm the observation, that a considerable number of the cases of calculi occur in children; but our author justly remarks, that "this obtains only among the poor classes;" and even not among these, if they be well fed. In the Foundling Hospital, for in-

stance, into which 1151 children have been admitted within the last twenty-seven years, three cases only have occurred; and in the Military Asylum at Chelsea, 6000 children have

furnished one case only of stone.

From these inquiries, Dr. Marcet is led to conclude, that "the tendency to form urinary calculi must arise from some general causes" independent of diet; and keeping in view the fact, that the disease is nearly unknown in tropical climates; and that great changes in the urine are effected by different states of the surface, he suggests it as a subject for inquiry, "whether there may not be some essential connexion between the state of the cutaneous functions, and the greater or less

prevalence of this class of disorders."

Having concluded these preliminary remarks, our author passes on to the more immediate object of his task, and treats, in the third chapter, of the different species of urinary calculi, of their external characters, and of their chemical nature and classification. He objects to that classification which has led to the expressions renal, cystic, or urethral calculi, "with a view to indicate that they had their origin in the kidneys, the bladder, or the urethra;" and advances satisfactory proofs that the varieties of calculi which the urine deposits are all "liable to appear in the different parts of the urinary passages:"

Those found in the kidney differ from each other, not only in shape, size, and external appearance, but also in their chemical nature. When not in one mass assuming the shape of the interior of the organ, the more general figure is round; but in some instances they are of a polygonial form, commonly

having three flattened sides.

"These," adds he, "are sometimes of a fawn or yellowish brown colour, sometimes grayish, their surface in either case being often remarkably smooth, as if coated with a fine varnish, or even in some instances having a degree of metallic lus-

tre not unlike burnished copper."-p. 49.

The calculi found in the bladder equally "vary" in size, form, and other external qualities. They are spheroidal, eggshaped, almond shaped, polygonal with flattened surfaces, and even sometimes almost cubic: "they vary from the size of a few particles of sand agglutinated together, to that of a mass almost filling the bladder." Their colour, which differs, often indicates their chemical nature: thus, when of a fawn or mahogany colour, "they almost always consist of lithic acid;" when white or greyish white, "they always consist of earthy phosphats; when dark brown or black, hard in their texture

and tuberculated, they consist of oxalat of lime; and when their surface is uneven, crystalline, and "studded with shining transparent particles," they may be regarded as consisting chiefly of the ammoniaco magnesian phosphat. In specific gravity "calculi vary between 1200 and 1900, water being 1000;" and our author observes that, "when sawed through, they exhale a faint animal smell." As it is probable that all natural calculi originate in the kidney, the nucleus is usually lithic acid; but any foreign matters introduced into the bladder, a circumstance which experience has proved may happen, almost invariably become the nuclei of calculi. But calculi are not always homogeneous; and Dr. Marcet correctly remarks, that their alternate layers often present specimens of each of the various species of calculus.

The calculi found in the prostate gland seldom exceed the size of a millet seed, are generally more or less rounded, and of a yellowish brown colour. These external qualities of cal-

culi are exemplified in the plates.

Before entering upon the chemical examination of calculi, our author gives a brief history of the discovery of their composition. It is unnecessary for us to follow him in this part of his tract; and we have only to state that Scheele was the first who developed the chemical nature of urinary calculi, and that to the labours of Dr. Wollaston we are most indebted for the knowledge we now possess on that subject. Fourcroy is accused of having assumed Wollaston's discoveries as his own, a charge which undoubtedly requires to be cleared up; and which we trust will arrest the attention of M. Vaquelin, his associate in all his researches into the nature of calculi.

"It is extremely painful," says our author, "to be compelled by justice to notice such an apparent want of fairness and candour in a philosopher, who devoted a long and brilliant career to the advancement of science. But unless this circumstance should hereafter be satisfactorily explained, it will be impossible for posterity to overlook such an unjustifiable omission, particularly in a man whose great fame and peculiar merits as a chemical philosopher, seemed to preclude all temptation to plagiarism."

Our author enumerates the following as the component parts of calculi: "lithic or uric acid; phosphat of lime; ammoniaco-magnesian phosphat; oxalat of lime and cystic oxyd;" and as one or other of these substances generally predominates in every calculus, although any of them rarely exists singly, he thus arranges calculi according to their compo-

nents.

"1. The Lithic Calculus.—2. The Bone-earth Calculus, principally consisting of phosphat of lime.—3. The Ammonia-co-Magnesian Phosphat, or calculus in which this triple salt obviously prevails.—The Fusible Calculus, consisting of a mixture of the two former.—5. The Mulberry Calculus, or oxalat of lime.—6. The Cystic Calculus, consisting of the substance called by Dr. Wollaston cystic oxyd.—7. The Alternating Calculus, or concretion composed of two or more different species, arranged in alternate layers.—8. The Compound Calculus, the ingredients of which are so intimately mixed as not to be separable without chemical analysis.—9. Calculus from the Prostate Gland."

As the chemical examination of each of these species is extremely important, we trust a little prolixity in our analysis

will be readily excused.

1. The Lithic Calculus, which is the most prevalent, and the external characters of which we have already noticed, is easily dissolved in the pure fixed alkalies, "from which it may be precipitated in the form of a white powder, by all the other acids." Of the mineral acids, the nitric only dissolves the lithic calculus, the residue, when evaporated to dryness, assuming a remarkable bright pink colour. It is sparingly soluble in lime water: blackens before the blow-pipe, emitting a peculiar smell, "and gradually evaporates, leaving only a small quantity of white ash, which is commonly alkaline." Destructive distillation resolves it into a new and peculiar acid and a variety of other products, which do not essentially illustrate its composition.

2. Dr. Wollaston first ascertained that some calculi consist entirely of phosphat of lime, "and described their external characters in the Philosophical Transactions for 1797, which our author has transcribed. When pulverised, this species of calculus dissolves readily in the muriatic or nitric acids. Before the blow-pipe it first blackens, from the charring of its animal matter, then becomes white again, and may be ultimately fused, if the heat be intensely urged; thus differing from the phosphat of bones, which, as it contains a greater proportion of lime, is not fusible by ordinary means. Dr. Marcet

regards this species of calculus as comparatively rare.

3. The Ammoniaco-Magnesian Phosphat was first discovered as a constituent of urinary calculi by Dr. Wollaston. It never forms the entire substance of a calculus; but it is often seen "in the form of minute sparkling crystals diffused over the surface or between the interstices of other calculous luminæ," which are soluble "in most, if not all, the acids."

During the action of the blow-pipe this phosphat emits an ammoniacal odour, and is imperfectly fused if the heat be strongly urged, "being reduced to the state of phosphat of magnesia." Ammonia is also disengaged during the solution of this triple calculus in the pure alkalies, "the alkali com-

bining with a portion of the phosphoric acid."

- 4. The Fusible Calculus, which is of very common occurrence, was first distinguished by Mr. Tenant, and its chemical characters developed by Dr. Wollaston. In its external appearance it resembles chalk, being white and friable; and often attains a large size, taking a pyriform shape, with a kind of peduncle at the broader end, corresponding to the neck of the bladder; which is well illustrated by a good engraved figure. It is a mixture of the triple phosphat and phosphat of lime; and easily fuses before the blow-pipe. It is this calculus which usually forms around foreign bodies introduced into the bladder; and the concretions that form "when urine is detained in any of the passages, are of the same nature."* We extract the account of the method of shewing its composition.
- "If it be pulverised, and acetic acid poured upon it, the triple crystals will be readily dissolved, while the phosphat of lime will scarcely be acted upon; after which the muriatic acid will readily dissolve the latter phosphat, leaving a small residue consisting of lithic acid, a portion of which is always found mixed with fusible calculus. This portion is generally minute; but sometimes it is more considerable, and in some instances it is so much so as to give to the calculus an equivocal character.
- "From the acetic solution the triple crystals may be recovered, with their characteristic appearance, by the addition of carbonat of ammonia; and from the muriatic solution, the lime may be precipitated by oxalat of ammonia. As to the phosphoric acid, its presence may easily be rendered obvious, after the separation of the lime, by adding to the remaining liquor a solution of muriat of magnesia, with some carbonat of ammonia, by which means an ammoniaco-magnesian phosphat is immediately precipitated in its usual form.† The neutral
- * For an analysis of a concretion of this kind, which formed in the vagina of a child, by Mr. A. T. Thomson, vide Repository, vol. viii. p. 111.
- "† The presence of phosphoric acid may also be shown by reducing it to the concrete state, by the blow-pipe, on a slip of laminated platina; the acid, when thus urged, communicating to the flame a peculiar green tinge. By processes of this kind, the nature of the component parts of

carbonat is better adapted to produce this effect than the sub-carbonat."

- 5. The Mulberry Calculus was first discovered to consist of oxalat of lime, united with some lithic acid and phosphat of lime, by Dr. Wollaston. When finely pulverised, it is soluble in the muriatic and nitric acids, aided by heat: and "when it is digested with alkaline carbonats, the alkali combines with the oxalic acid, and the carbonic acid with the lime." On exposure of this calculus to a red heat, the oxalic acid is volatilized, and the residue is quick lime. But oxalat of lime is also found in some smooth calculi; and Dr. Marcet has met with three varieties of small mulberry calculi, having a distinct crystalline texture, which have been hitherto undescribed.
- "They were all of a pale brown colour, and the crystals of which their surface was composed, though at first sight having the appearance of mere square plates, proved, upon closer ex-

amination, to be very flat octahedrons."

6. The Cystic Oxyd was also discovered by Dr. Wollaston. In external appearance it resembles the triple calculus, but is more compact, is a confusedly crystallized mass, yellowish, semitransparent and glistening; and has been found remarkably free from other ingredients. Before the blow-pipe it emits "a peculiarly fætid smell; and is so easily acted upon by reagents that it is best known by its insolubility" in water, alcohol, acetic, tartaric, and uric acids," and neutral carbonat of ammonia. Like other oxyds, it unites with both acids and alkalies, for which reason, and as the specimens Dr. Wollaston examined were taken from the bladder, that celebrated chemist named it Cystic oxyd; but our author details two cases in which it was unquestionably of renal origin. He, however, does not propose to change the name.

7. Compound Calculi in distinct layers "are composed of different species of calculous depositions disposed in layers around a common nucleus." The plates exhibit various specimens of these, and in particular one, "in which lithic acid may be distinctly seen in the centre, pure phosphat of lime next to this, then oxalat of lime, and ultimately the fusible

crust enveloping the whole concretion."

8. Compound Calculi, with their ingredients intimately mixed. Dr. Marcet refers to this head all calculi which have

calculi is easily ascertained; but when an exact knowledge of proportions is desired, more elaborate operations are required, some of which are pointed out in Dr. Wollaston's papers in the Philosophical Transactions for 1797 and 1810."

no characteristic feature indicative of their belonging to any of the other classes.

9. Dr. Wollaston has ascertained that all the Calculi found in the prostrate gland consist of neutral phosphat of lime.

With regard to urat of ammonia, arranged by Fourcroy as a species of urinary calculus, our author in common with Dr. Wollaston and Mr. Brande, has looked for it in vain; although, from analogy, he does not altogether deny its occasional existence in human urinary calculi, having observed it in the urine of the boa-constrictor. In the fourth chapter, Dr. Marcet describes two nondescript calculi; one of which he has named xanthic oxyd, from its property of forming a lemon-yellow compound when acted upon by nitric acid; and the other, fibrinous calculus, on account of its chemical properties corresponding closely with those of fibrine. these are as yet solitary instances, he candidly admits, that unless other similar calculi should occur to future inquiries, they "would hardly deserve any farther notice." It is certainly not by the collection of singular cases, and the description of solitary morbid productions, that medical science is to be advanced; but by disseminating an accurate knowledge of those results of disease which are every day occurring.

In the fifth chapter an attempt is made to give some idea of "the comparative frequency of the different species of urinary calculi," by a tabular display of eighteen specimens of the Norwich collection, which our author chemically examined, and that of Guy's Hospital, amounting to eighty-seven speci-In the first, the lithic calculi constitute one third of the whole; the fusible calculi are next in regard to frequency; the numbers of the fusible and the mulberry are two thirds of the number of the lithic; and the compound concretions, "one third only of the mulberry species;" yet by far the greatest proportion of deaths has been amongst patients labouring under calculi of the compound or mixed kind. Guy's collection there is a much smaller proportion of lithic calculi; while "the fusible, the mulberry, and the mixed calculi, bear to each other nearly the same ratio as in the former:" a proof, in the opinion of our author, that the calcareous nature of the Eastern counties of England has no share in the greater prevalence of calculous complaints in these counties, the calcareous calculus being comparatively more frequent in London than in these districts.

The sixth chapter, which is intended chiefly for the use of those who are not very "conversant with chemical manipulations," treats "of the analysis of urinary calculi, with a view

to their easy discrimination." Our author first points out the instruments requisite for this purpose, illustrating his description by a sketch; and then details the easiest modes of analysing those calculi which are most prevalent. A lithic calculus may be generally known by its external characters; but when these are not distinct, a very small fragment of the calculus detached by the point of a knife must be exposed, by means of a small pair of platina tongs or forceps, to the action of the blow-pipe.

"If lithic acid be its principal ingredient, the fragment blackens, emits a smoke having a strong and characteristic odour, and is gradually consumed, leaving a minute quantity of white

ash, which is usually alkaline."

The lithic calculus is also soluble in caustic alkali; and, to ascertain this fact, it is only requisite to scrape off a little of the calculus into a watch glass, pouring on it a few drops of the alkali, and to hold the glass over the flame of a lamp until the solution be effected; which, however, will generally not be complete, owing to other substances being contained in the calculus. By adding any acid to the solution, a white precipitate is immediately formed, if lithic acid be present. Or to a particle of the suspected calculus, a drop of nitric acid may be added, and heat applied; if lithic acid be present, it will be dissolved; "and if the solution be evaporated to dryness, the residue assumes a beautiful pink or carmine colour," which

is imparted to water, in which this residue is soluble.

A phosphat of lime calculus, independently of external characters, may be ascertained either by exposing a particle of it to the action of the blow-pipe, before which it first blackens and then becomes perfectly white, still retaining its form; or it may be pulverized and dissolved in dilute muriatic acid, from which, "if the excess of acid be not very considerable, the lime may be precipitated in the form of an insoluble compound by oxalat of ammonia." The ammoniaco-magnesian phosphat may be suspected to predominate when a calculus is extremely white and sparkling; but this is rendered certain by the evolution of a pungent ammoniacal odour, on heating a portion of the calculus, or pouring on it a few drops of caustic potash. The property from which it has derived its name enables us readily to distinguish the fusible calculus. When melted, it runs into a globule, semi-transparent, and of a pearly appearance. We have already noticed the method of analysing this calculus by chemical means. The mulberry calculus, although generally distinguishable by its external aspect, yet, is not always so; but, before the blow-pipe it swells

out into a white efflorescence, which is caustic lime, and changes the colour of tumeric paper to red. The cystic oxyd, besides being recognized by its unstratified structure, waxy appearance, and peculiar odour when heated, is distinguished also by its ready solubility "both in acids and alkalies." The compound calculus requires more complex and scientific methods of analysis, unless it be composed of distinct layers,

which can be separately examined.

Having finished the description of the means of ascertaining the different species of calculi, our author, before entering upon the treatment of calculous disorders, makes a digression from his main subject to notice "some other kinds of animal concretions not belonging to the urinary passages, both in man and other animals." The concretions he notices, are those found in the various viscera, in the salivary glands, and in the intestinal canal of quadrupeds as well as that of man. He mentions having seen a calculus found in the rectum of an infant with an imperforated anus, which closely resembled the fusible urinary calculus: and some of a caseous nature, that proceeded from "caseous matter actually formed in the intestines, from milk taken as nourishment by the patient, and coagulated by the gastric juices." Some also of a very singular nature are mentioned, in which the nucleus were grains of oats. The concretions found in the intestines of the horse and some other large quadrupeds, are composed almost entirely of the ammoniaco-magnesian phosphat. A large one found in a rhinoceros, and given to our author by Dr. Wollaston, consists of the triple phosphat "disposed in layers round a hazle nut, alternately, with thin laminæ of phosphat of lime." This latter substance, Dr. Marcet has remarked, usually forms part of the composition of the balls of hair sometimes found in the intestines of the cow and ox. The urinary calculi of quadrupeds are composed of the two phosphats and the carbonat of lime, lithic acid never having been detected in them; although it has been found in the droppings of birds, the urine of the camel, and the excrements of the boa-constrictor. Gouty concretions are now generally known to be either, to use Dr. Marcet's language, lithats or super-lithats of sodæ; and biliary calculi to consist chiefly of adipocire; but, although it is not noticed by our author, yet we may mention, that carbonat of lime also has been found in biliary concretions, incrusting a nucleus of adipocire, and forming that variety which has been termed glauco-crustaceous by Mr. A. T. Thomson, who first observed it.*

^{*} Vide Medical Repository, vol. iv. p. 467.

In proceeding to treat "of the chemical and physiological principles to be attended to in the treatment of calculous disorders," the subject of the concluding chapter of the volume, Dr. Marcet first examines briefly the "probable limits of the powers of medicine," in these affections. He contends, that although little or nothing can be expected from medicine in destroying already formed calculi, too large to be discharged by the natural passages, yet in some instances, the sharp edges of small calculi or gravel may be so blunted by the internal use of chemical solvents, as to allow them to be passed "with less difficulty or inconvenience;" and that, at all events, the prevalence of the particular diathesis may be altered. Let us examine his exposition of the facts on which these opinions are founded.

In taking a summary view of the practice in calculous disorders, Dr. Marcet properly regards the substances to be acted upon as unorganized bodies, although they are contained in living parts; and considers the chemical treatment to rest upon the following general principles:

"Whenever the lithic secretion predominates, the alkalies are the appropriate remedies; and the acids, particularly the muriatic, are the agents to be resorted to, when the calcareous

or magnesian salts prevail in the deposit."-p. 148.

But the question, can acids or alkalies reach the urinary passages? immediately suggests itself. This, our author thinks, experience enables us to answer satisfactorily in the affirmative, as far as concerns the alkalies; but with respect to the acids, the reply is more equivocal; and he is willing to admit, that although both may pass through the circulation unchanged, yet that the quantity is too inconsiderable to make much, if any, impression upon pre-existing calculi-Still, however, the prevailing diathesis may be checked; for even supposing that none can reach the urinary organs, these remedies may produce beneficial changes "during the first stages of assimilation;" for example, by neutralizing excess of acid, or checking an alkalescent tendency, "or otherwise disturbing those affinities, which, in the subsequent processes of assimilation and secretion, give rise to calculous affections." When an acid is indicated, "from five to twenty-five drops of the strong muriatic acid, taken two or three times a day, sufficiently diluted with water;" or if an alkali be the remedy required, soda water, or from five to twenty or thirty grains of carbonat of soda," taken two or three times, are recommended by our author. In stating the dose of the soda, he uses the following words: "whether in the state of subcarbo-

nate or in that of neutral crystallized carbonat;" but we would suggest, that if the alkali be the useful ingredient, he must know, as a chemist, the difference in the quantity contained in these two compounds; and hence the necessity of prescribing a larger dose, when the carbonat is employed. In our opinion, the dose is too small, in either case, to prove beneficial. Dr. Marcet seems aware, that it may be questioned whether the carbonats can act by their chemical agency, quo alkali, in the urine in calculous disorders? He states the affirmative as his opinion, and conceives the carbonic acid itself may be beneficial, by producing "such stimulating effects on the digestive organs, as to counteract, independently of any direct chemical agency, the particular action which gives rise to urinary concretions." It is in this way only, in our opinion, that the neutral carbonats, or soda water, can be useful; for if the alkali combine with the acid in the stomach, which is chiefly the acetic, the acetate formed will more probably pass off by the bowels than be again decomposed, and give the urine alkaline properties. But the alkali, it is said, may be detected in the urine; that, however, we reply, is also the case when magnesia is taken, which is generally admitted to act merely by removing acidity from the digestive organs Indeed it seems evident to us, that if alkalies can produce any effect in calculous affections, as chemical agents, they must be given in the caustic form, and more largely than the majority of stomachs can bear; but it is much more probable that the benefit which is found to follow from using them, results partly from their neutralizing the superabundant acid in the stomach, and partly from allaying irritation in the coats of the bladder and urinary passages, (an effect which our author admits they produce,) when they pass unchanged through the kidneys.

Some useful cautions are given regarding the use of magnesia, which our author has seen prove extremely hurtful in a case in which the gravel deposited by the urine proved, "on examination, to be of the magnesian or fusible kind." We were rather surprised, under this head, to meet with the fol-

lowing sentence from the pen of Dr. Marcet-

"the powers of which (magnesia) probably depend partly upon its aperient effect, and partly upon the absorption of redundant acid."

Now we believe it is generally admitted, that magnesia is not in itself aperient, and acts only as such when it meets with acid in the prime viæ.

One of the greatest difficulties attending the treatment of calculous disorders, arises, undoubtedly, as our author remarks, from the alternation of calculous deposits; and consequently as great attention is requisite to the state of the urine and its sediment, the profession is indebted to him for making public the following remarks of Dr. Prout on this subject:

"When the urine contains urea in abundance, the phosphats generally prevail; while if the urine abounds in colouring and extractive matter, we may conclude that the lithic acid is the prevailing secretion. According to Dr. Prout's observation likewise, although urea and lithic acid do not co-exist in urine in large quantities, when the phosphats are deficient; yet sometimes the three substances, urea, lithic acid, and the phosphats, are found to exist together in abundance."—p. 169.

Dr. Marcet thinks the formation of the mulberry calculus may be checked by the use of the mineral acids, "which have the power of dissolving the oxalat of lime in its nascent state;" but there is an insurmountable difficulty respecting this calculus, as well as the cystic oxyd, the xanthic and the fibrinous calculi, of which he is fully aware; viz. there being "no vestiges of them discoverable in the urine, it is not easy to perceive to what kind of alteration in that secretion it is most desirable to direct the treatment, with a view to correct the calculous diathesis in question." The beneficial effects of purgatives and turpentine combined with opium in expelling calculi, are noticed; but no explanation of the latter hazarded. Some brief observations are offered on the subject of diet; and our author is of opinion, that as in some animals more lithic acid is secreted when they are fed exclusively upon animal food, it may be inferred, "that it might be detrimental to restrain patients affected with this kind of calculous, from taking a due proportion of vegetable nourishment." We would remark, however, that as dyspepsia is a very probable cause of the continuance of the calculous diathesis, if it cannot be said to originate in that morbid state of the digestive functions, whatever can relieve the dyspeptic symptoms, must necessarily tend to diminish the disposition to the formation of calculi; and we know no means more likely to effect this than an animal diet and complete restraint from vegetable nutriment. With regard to the direct application of solvents to calculi in the bladder, by injecting into that viscus weak solutions of the solvents, our author's opinion is, that the subject has not "yet been sufficiently investigated." He thinks that benefit may result from the practice when sufficient evidence can be obtained as to the nature of the calculus; but

much caution is required on the part of the practitioner, and great patience and perseverance on that of the invalid. In one case in which he employed the muriatic acid, the quantity of the acid, which was at first two drops only in four ounces of water, was gradually increased to twenty-three drops, "without producing any inconvenience, though the solution was often retained in the bladder as long as an hour." The injection, however, besides the acid, contained in solution half a drachm of opium. He properly advises, that the catheter be left in the urethra; and that always before using the injection, the bladder should be emptied as completely as possible.

Upon the whole, we have no doubt that the profession will regard this volume as an important addition to those works it already possesses, the value of which depends on their practical utility; as it brings the means of investigating a subject which has hitherto been regarded as requiring a minute knowledge of chemistry, and extreme nicity of manipulation, within the reach of every practitioner; and consequently tending to improve the treatment of calculous complaints. In another point of view, it demonstrates the essential importance of Chemical Science to the medical philosopher; and is in itself an admirable model of the great advantages of simplicity in scientific inquiries.

INTELLIGENCE.

Domestic.

GAMAGE ON FEVER.

WILLIAM GAMAGE, Jun. M. D. of this town, has just published a pamphlet, entitled "Some account of the fever which existed in Boston during the autumn and winter of 1817 and 1818, with a few general remarks on typhus fever." This pamphlet contains nineteen cases of fever treated by blood-letting, three cases of examination after death, with reflections on the proximate cause of the disease and on the treatment. The record of facts appears to be faithfully made and must be considered valuable. In respect to the inferences to be drawn from them; individuals will, no doubt, differ. The work merits a perusal.

Foreign.

SINGULAR TREATMENT OF RETROVERTED UTERUS.

Retroversio uteri gravidi cum prolapsu vaginae. A woman forty years of age, half gone in her pregnancy, had fallen down stairs a month ago, upon the os coccygis, the vagina had prolapsed to the left side, the uterus was retroversed backwards, the urine only went off guttatim when the prolapsed parts were removed, and the urinary bladder was much distended. At the same time she suffered violent pains in the abdomen, with want of appetite, febrile pulse, anxiety and low spirits. The reposition did not succeed in the usual way, but the author found out an instrument for that purpose, which is represented in the plate. It consists of a steel staff bent to the axis of the pelvis, terminating at its lower end in a wooden handle, and at its upper end in a blunt cone of cork, covered with soft leather, and which is concave at its upper sur-

face. Having made the woman support herself upon her knees and elbows, he introduced the instrument directing it with the first finger of the left hand, towards the posterior part of the vagina, so as to have the convexity of the staff backwards, so long, till the concave surface of the cone received the fundus uteri, and now he lifted the uterus forwards by the handle of the instrument, he held in his right hand. The uterus instantly and with some noise jumped into its normal situation, into the upper pelvic aperture. The prolapsus vaginae, the dysury and the pain instantly ceased, and the pregnancy was normally finished. The author also recommends this instrument which he calls Hysteromochlion or Vectis uterinus in obliquitas, prolapsus and inversio uteri.

Continental Medical Repertory.

METHOD OF REDUCING HERNIA IN RUSSIA.

JOHN CONRAD HILTEBRANTD on a kind of large dry cupping machine, used by the Russians for reposing incarcerated ruptures. They take a pot capable of holding about a few pounds of liquid, stop up the hole it has got at the bottom with a cork, rarify the air contained in it by lighted tow, and put it along with the burning tow upon the abdomen, previously rubbed with oil or soap. Thus the abdominal parietes and bowels are, not without pain, drawn into the pot, and the parts contained in the rupture into the abdomen. The pot is removed by drawing the cork and if the effect is not yet complete, the pot is again replaced. This popular remedy, the author like many other physicians, has found very efficacious and harmless. He cured with it incarcerations, where vomiting and singultus had already taken place, where the pulse was quick, hard and small; and where the operation was going to be resorted to, other remedies having been found ineffectual. In an inflammatory state, blood should be drawn first; in lusty, dropsical or pregnant people this method finds no application. The common Russians however make also use of it in childhed. hæmorrhages and spasms, which, according to their theory, they derive from an irregular position of the uterus.

Observatio de lithocele; by P. F. PFAHLER. A man thirty-one years of age, whom when a boy of seven, two caculi had been cut out of the scrotum, again laboured under the same complaint in the anterior left part of the scrotum, causing violent pain, dysury and impotence. The author cut it open longitudinally, and removed three calculi laying close to the testicle, weighing one ounce and a half. A quantity of Vol. VII.

fetid urine flowed from the wound and with it eleven stones as big as lentils were voided; the bag being cleansed with lint, still more stony concretions came forth. The Parietes of the scrotum were much thickened. The wound however did not heal, the urine drippling out continually. The author thus introduced a catheter, through the urethra into the urinary bladder, and left it in six weeks; when the wound was perfectly cured, and the patient recovered, who was still quite well for ten years after. This was a diverticulum vesicae which arises, when its muscular coat relaxes, or is spasmodically contracted, and the urine distends the mucous membrane in one particular place. This diverticle at the time, when the continuation of the peritoneum still formed an open canal into the tunica vaginalis testium propria, had descended with it, and has come in so immediate a contact with the testicle, as to form a hernia inguinalis cystica. The urine stagnating in the diverticle produced calculi; the diverticle seems to have entirely disappeared by suppuration after the operation.

Experiments and observations upon the State of the Air in the Fever Hospitals of Cork, at a Time when they were crowded with Patients, labouring under Febrile Contagion. By Edmund Davy, Esq. Professor of Chemistry, and Secretary to the Cork instituion.

From numerous experiments made on air, collected in different countries, by the most enlightened enquirers, it seems to be generally admitted, that the chemical constitution of the atmosphere is nearly the same at all seasons of the year, and in all parts of the globe. Nitrogen and oxygen gases form its principal component parts: it also contains a minute portion of carbonic acid gas, and a variable quantity of aqueous vapour. As oxygen gas is essential to animal and vegetable life, and to the processes of combustion, fermentation, &c.; and, as it is constantly entering into new forms, by which its peculiar properties are modified or destroyed, it is considered the most important, and the most active part of the atmosphere. The most general and important change that the oxygenous portion of the air undergoes is its conversion into carbonic acid gas, a substance, which, though obnoxious to animals, is yet made subservient to vegetable life; and this change is invariably-connected with the exertion of the vital functions of organic beings, and with the burning of coals, wood, candles, &c. The salubrity

and healthy state of the air depend, in a great measure, upon the quantity of oxygen gas it contains; and, this quantity (about 21 per cent.) appears to exist in all places exposed to the free atmosphere and the influence of winds. But the same uniformity of composition does not prevail in the air of confined dwelling houses, crowded theatres, and hospitals, that are badly ventilated. At a time when typhus was very prevalent in Cork, and there were, in the two fever hospitals, about 280 patients, labouring, for the most part, under febrile infection, it occurred to my friend Dr. Daly, whose active exertions in the cause of humanity are well known, and likewise to myself, that it would be a desirable object to ascertain the state of the air in the fever wards; and I immediately undertook a series of experiments, on the subject. To give in detail all the minutiæ of my experiments, would far exceed the limits of this paper, I shall, therefore, briefly notice my methods and results, and close the communication with a few observations connected with the subject. I procured air from five large and small wards in the House of Recovery, and from the two wards in Peacock-lane Hospital: I collected it from different parts of the rooms; as, in the middle, at the sides, near the floor, and at different heights from it, and close to the beds of the patients. In every instance, the air was obtained by emptying on the spot bottles that had been previously filled with distilled water, and immediately closing them. The bottles were perfectly air-tight, being all furnished with well-ground glass stoppers. The air was examined soon after it had been collected. The first and most important object of my inquiry, was to ascertain the quantity of oxygen gas in the several For this purpose, I employed hydrogen gas, bottles of air. and the electric spark; a method that seems to unite more simplicity and elegance than any other; and, with due precaution, is susceptible of great accuracy. As the purity of the hydrogen, used in experiments of this kind, is of consequence to the accuracy of the results, it may be proper to notice the mode by which it was obtained; especially as it has, I think, some little novelty, and seems to be quite unexceptionable, precluding all source of error, from the presence of common air. I put some small pieces of zinc into a glass, and nearly filled it with water that had been boiling for some time. I then filled a tube with the boiling water, and inverted it in the glass, and after adding sulphuric acid, I shortly after collected the gas.

I made a great number of experiments, using, in every instance, an excess of hydrogen gas. In every trial, I mixed 0.30 of a cubic inch of the air under examination with 0.30 of

pure hydrogen gas; and, after agitating the mixture in a long, thick, detonating tube, furnished with wires, the charge of a Leyden phial was passed through the tube; and the residual air, on being transferred to the cubic inch measure, occupied about 0.40 of it. I venture to state this as a general result; for, though, in a few cases, there was a difference of about one per cent. more or less, yet this difference was rather apparent than real, owing to the difficulty of measuring uniform quantities of air, and it was corrected by a careful repetition of the experiments. Now, as two volumes of hydrogen and one of oxygen gas enter into the composition of water,—if the foregoing results are made the basis of a calculation,—the apparent quantity of the oxygen gas in the air from the different fever-wards will amount to about 22.22 per cent.; but this is not the real quantity; a slight allowance must be made for a minute portion of air disengaged from the water after the detonation of the mixed gases; and, when this is taken into account, the oxygen may be fairly estimated at about 21 per cent. And, according to the statements of Sir Humphry Davy, and other able chemists, 21 per cent. is the actual quantity of oxygen gas in the external atmosphere, in different parts of the globe. It may be remarked, that the variations in the temperature and pressure of the atmosphere, during the preceding experiments, were so small, as not to influence the accuracy of the general results stated.

With a view to confirm the preceding statements, I made comparative trials upon air collected from the open atmosphere, at the top of the observatory belonging to the Cork Institution; a situation, perhaps, not less salubrious than any other in Cork. The experiments were conducted in a manner precisely similar to those I have noticed; part of the same hydrogen was employed, and every precaution used to ensure accuracy. And, in every case in which the electric spark was passed through a mixture of the air under examination and hydrogen gas, in the proportion of 0.30 of each, the residual air measured about 0.40. I collected air from Hughes's lane, a place notorious for the number of cases it had furnished of typhus; but it yielded, on examination, the same uni-

formity of result.

I have made some trials on the other gaseous constituents of the air, collected from the different fever wards, and compared them with similar experiments on air from the observatory of the institution; and, I have found a very near coincidence in both series of results.

Thus, judging from the absorption that took place in the bottles of air from the fever wards, when placed for some time in water, and when agitated in this fluid,—and, especially from the effects of lime water on the air, -and, comparing, by similar trials, air collected from the atmosphere in salubrious situations; I could scarcely, in either case, discover a perceptible difference in the quantity of carbonic acid gas. In one instance, I filled a two quart ground-stoppered bottle with the air from a large ward at the House of Recovery; and, on the spot, I put into the bottle a small phial of lime water, and well closed it. After much occasional agitation, and an interval of about two days, I examined the carbonate of lime formed, and compared it with the quantity produced under similar circumstances from the same bottle filled with air from the observatory, and treated with lime water; and I was unable, in this way, to detect any appreciable difference. If this method may be relied on, I think I may venture to state, that the air from the ward did not contain near one per cent. more of carbonic acid gas than the air from the observatory.

After I had separated oxygen and carbonic acid gas from the different airs examined, I could not detect the presence of any other gas than nitrogen, which exhibited its characteristic negative properties. The want of leisure prevented me from varying and multiplying my experiments, so as to ascertain the exact proportion of the carbonic acid and nitrogen gases in the airs; and it may be proper to observe that, during the time I was engaged in this enquiry, the variations of temperature, moisture, and pressure of the atmosphere, were very small, and too often connected with accidental circumstances, to be accurately noticed. Lond. Med. and Phys. Journal.

On the Test of Silver for Arsenic: by John Prideaux, Esq.

In your Number for January, is a letter from Mr. Hume, on the subject of his Silver Test for Arsenic; in which, after speaking rather disrespectfully of the objections to it, he puts the following questions:—

1. Is any test of arsenic infallible?

2. Is the production of the metal, in criminal cases, the

only proof to be depended on?

3. Are phosphates, or phosphoric acid, always or ever present, in any of the animal fluids, in such a state as to yield a yellow precipitate with silver?

4. Is a decoction of onions capable of baffling the powers

of chemistry to detect arsenic?

The reply to the second of these queries depends manifestly on that to the first. The fourth refers to a particular case, in which some detailed experiments, supposed to have proved the presence of arsenic, were repeated on infusion of onions with similar effects. The first and third, therefore, are the only ones that need discussion, and they will be best considered together.

The test for arsenic, being one on which life or death may frequently depend, is of infinitely greater importance than any

other with which chemistry has to do.

The word "infallible," applied to a chemical test, has a two-fold signification: it must always indicate its re-agent, when present; and never produce deceitful appearances, by the action of other substances.

When suspected matter is found in the stomach, or its vomited contents, in the solid form, I believe Mr. Hume's test may be applied with the utmost confidence. But, when arsenic is dissolved in the liquid contents of the stomach, it may be doubted whether the same accurate results will ensue. I have tried the test in several instances where this poison had been given to dogs, and could never succeed in producing the yellow precipitate. Though, on mixing a solution of arsenic with the liquid taken from the human stomach after death, the precipitate appeared, when the quantity of mineral was considerable, and when the muriatic acid and some of the animal matters were got rid of, previous to the application of the test; yet, even in this way, success was not obtained with very minute proportions of the poison.

Has Mr. Hume ever successfully examined the liquid contents of a stomach, where arsenic was known to be the cause of death?—And can he point out a mode by which the same success may be generally depended on? He must see the necessity for this, when his test is to be considered a standard for the decision of juries, by which their "verdict is to become unobjectionable." The ammoniaco-nitrate is not applicable, as it would entangle the arsenic in so overwhelming a quantity of muriate as to be hardly separable by any

means

^{*} Mr. Hume's paper, Phil. Mag. September, 1812, p. 109.—See our Journal of the same date and page, Vol. xxviii., and also page 284 of the same Vol.: and Vol. xxix, p. 46.

On the other hand, in the liquid contents of a stomach, 'if a yellow precipitate be produced by the silver test, can we depend on its being the effect of arsenic? It may fairly be doubted, whether, since phosphate of soda does assuredly exist in the gastric fluid, its quantity may not be such, in some states of disease, as to affect the test in a slight degree; and a very little precipitate is all we can expect from arsenic in the state I am treating of. But phosphate of soda is used as a medicine, in quantity from one to two ounces at a dose, and is not very unlikely to be employed by a person, on the attack of pain in the stomach, before medical aid be resorted Supposing the person to die of cholera morbus, it is by no means certain, that the medical attendants would be made acquainted with the salts having been employed; and the silver test would be more probably affected by the contents of his stomach, than if he had swallowed a quantity of Fowler's solution, even greater than is requisite to produce death. It will, therefore, be necessary to have the means of distinguishing with certainty between these yellow precipitates, as obtained from the liquid contents of the stomach, when in such a state of disease as to have destroyed life. How are the methods pointed out in Mr. Hume's letter applicable?—Are they sufficient?-Would Mr. Hume himself venture " to swear to the presence of arsenic," by the application of his test to such a liquid?

Although I am satisfied, that, with solid arsenic, or suspected matter, nitrate of silver may be depended on in the hands of a chemist, yet I can by no means agree with Mr. Hume, that the verdict of juries, in cases of trial for poison, "will be rendered quite anobjectionable by its discovery," as a test. Besides the uncertainty, from which I cannot think it exempt, where no solid matter can be discovered, juries, and even judges, are very rarely qualified to appreciate the abilities of the analyst to whom the suspected matter may have been committed. A novice in chemistry might without unjust design, occasion the death of an innocent person, by want of skill in investigation. It is true, if he were cross-examined by a chemist of experience, his testimony would lose its force; but such an examination cannot take place in a court of justice. The production of the metal is not liable to so much objection; for, although an unskilful hand would often fail when the mineral was present, yet he could not mistake any other metal for arsenic, and the risk of error would thus lie on the less injurious side. A quarter of a grain, and probably a much maller quantity, will exhibit the metal very readily.

My objections to this test apply, however, only to its judicial employment. Whenever it is not dissolved in complicated animal or vegetable fluids, and where a mistake in its use leads to no dangerous consequences, its value cannot be questioned. Whether the ammoniaco-nitrate be an improvement, may admit of a doubt. In mineral analysis, on applying a liquid so strongly alkaline, other experiments may be necessary to distinguish the action of the alkali from that of the silver. May not some oxides, or subsalts, fall down, of such a colour as to indicate the presence of arsenic where it does not exist? When the alkali is applied first, we cannot be deceived.

I avoid entering into experimental details, as they may easily be exhibited by any chemist, and would uselessly occupy your pages. My object is, not to start futile objections, but to learn whether the known inconveniences admit of being remedied. I have just read the papers to which Mr. Hume refers (except the first, which is well known,) with every attention, and find nothing in them applicable to the matter in question. Phosphate of soda is not once mentioned, nor does it appear that Mr. Hume was aware of its effect. It was discovered, if I remember right, since the publication of the last of those papers, by a gentleman of Oxford, and published in the Annals of Philosophy. I do not know that any mode of distinction was pointed out by Mr. Hume, or any one else, until after the trial at Launceston, in March last year; and, I must be forgiven for repetition, when I say, that I cannot think we shall be justified in influencing the opinion of a jury by tests of this kind, until the subject has been much more inves-Lond. Med. and Phys. Journal tigated.

ERRATA.

Page. Line. 264 16 from the bottom, for but read birth.

Plymouth, March 6, 1818.

266 4 from the top, insert the before face.

267 11 from the bottom, insert not before entirely.

269 10 from the top, for deserved read observed.

270 11 from the bottom, for Gardier read Gardien.

The New-England Journal.

OF

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OCTOBER, 1818.

No. IV.

Surgical account of the Naval Battle on Lake Erie, on the 10th of September 1813. By Usher Parsons, M. D. Surgeon in the United States Navy.

[Communicated for the New-England Journal of Medicine, &c.]

MESSRS. EDITORS,

O such of your readers as are unacquainted with the duties of a surgeon in a naval engagement, and with the description of wounds that fall under his care, the following

sketch may be acceptable.

Our force employed in this action, consisted of nine vessels with about six hundred officers and men, and had been out of port four weeks, either cruising or lying at anchor in Put-in-bay, a safe harbour, among a cluster of islands near the head of the lake. The crews left port in good health, but shortly after were visited with an epidemic, which spread through the fleet, attacking about twenty or thirty in a day. It answered the description of a bilious remittent fever, was of short duration, except in a few instances, in which it degenerated into a typhus, and in only one instance proved fatal. So rapid were the recoveries, that, of above two hundred cases, only seventy-eight were reported unfit for duty on the day previous to the action. Thirty-one of these were on board the Lawrence, and about the same number on board the Niagara, their whole crews being about one hundred and forty men each.

About twelve o'clock, on a clear pleasant day we met the enemy. The action soon became general, and was severely felt; especially on board the Lawrence, the flag ship; two of

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the enemy's largest vessels engaging her, at a short distance, for nearly two hours; part of which time the men fell on board of her faster, than they could be taken below. The vessel being shallow built, afforded no cock-pit or place of shelter for the wounded; they were therefore received on the wardroom floor, which was about on a level with the surface of Being only nine or ten feet square, this floor was soon covered, which made it necessary to pass the wounded out into another apartment, as fast as the bleeding could be stanched either by ligatures or tourniquet. Indeed this was all that was attempted for their benefit during the engagement, except that in some instances division was made of a small portion of flesh, by which a dangling limb, that annoyed the patient, was hanging to the body. Several, after receiving this treatment were again wounded, among whom was midshipman Lamb, who was moving from me with a tourniquet on the arm, when he received a cannon ball in the chest; and a seaman brought down with both arms fractured, was afterwards

struck by a cannon ball in both lower extremities. An hour's engagement had so far swept the deck, that new appeals for surgical aid were less frequent; a remission at this time, very desirable both to the wounded and myself; for the repeated request of the Commodore, to spare him another man, had taken from me the last one, I had to assist in moving the wounded; in fact many of the wounded themselves took the deck again at this critical moment. Our prospects nevertheless darkened, every new visitor from the deck bringing tidings still more dismal than the last, till finally it was announced that we had struck. The effect of this on the wounded was distressing in the extreme; medical aid was rejected; and little eise could be heard from them, than "sink the ship"-"let us all sink together." But this state of despair was short. Commodore, who was still unburt, had gone on board the Niagara, and, with the small vessels bearing down upon the enemy, soon brought down the flags of their two heaviest ships, and thus changed the horrors of defeat into shouts of victory. But all the wounded were not permitted to mingle in the joy. gallant Brooks, and some others were no more. They were too much exhausted by their wounds, to survive the fusion that immediately preceded this happy transition.

The action terminated shortly after three o'clock; and, of about one hundred men reported fit for duty in the morning, twenty-one were found dead, and sixty-three wounded. The wounded arteries occupied my first attention, all which, except where amputation was required, were rendered secure before

dark. Having no assistant, (the surgeon on board with me being very sick,) I deemed it safer to defer amputating till morning, and in the mean time suffered the tourniquets to remain on the limbs. Nothing more was done through the night than to administer opiates and preserve shattered limbs in a uniform position. At daylight a subject was on the table for amputation of the thigh, and at eleven o'clock all amputations were finished. The impatience of this class of the wounded, to meet the operation, rendered it necessary to take them in the same succession, in which they fell. The compound and simple fractures were next attended to, then luxations, lacerations and contusions, all which occupied my time till twelve o'clock at night.

The day following I visited the wounded of the Niagara, who had lain till that time, with their wounds undressed. I found the surgeon sick in bed, with hands too feeble to execute the dictates of a feeling heart. Twenty-one wounded were mustered, most of whom were taken on board the Lawrence and dressed, and afterwards such as were lying in like manner on board the small vessels. In the course of the evening the sick were prescribed for, which was the first attention

I had been able to render them since the action.

The whole number of wounded in the squadron was ninetysix. Of these twenty-five were cases of compound fracture,
viz. of the arm, six; of the thigh, four; of the leg, eight; of
the shoulder, three; of the ribs, three, and skull, one. Of simple fracture there were four cases; viz. of the thigh, leg, arm
and ribs. Grape-shot wounds were three; and cannister four.
The splinter and lacerated wounds, large and small, were thirtyseven. There were two cases of concussion of the brain;
three of the chest, and two of the pelvis. The contusions
large and small were ten, and sprains six.

Of the whole number, three died; viz. midshipman Claxton with compound fracture of the shoulder, in which a part of the clavicle, scapula and humerus was carried away; a seaman with a mortification of the lower extremity, in which there had been a compound fracture, and another with a fracture of the scull, where a part of the cerebral substance was destroy-

ed.

The compound fractures of the extremities were much retarded in their cure, by the frequent displacement of the bones, by the motion of the ship in rough weather, or by some other unlucky disturbance of the limb. In this way the bones in one case did not unite, until after forty day had elapsed, and in two or three other cases, not till after twenty-five

days. The delay of amputations already mentioned had no effect on the success of the operations. Every case did well.

There were not more than two very singular wounds, or such as would be unlikely to occur in any sea engagement. In one of these cases, a grape shot four times as large as a musket ball, passed under the pyramidal muscle, without injuring the peritoneum. In the other, a cannister shot twice the size of a musket ball entered the eye, and on the fifth or sixth day was detected at the inside of the angle of the lower jaw and cut out. In its passage it must have fractured the orbitar plate of the upper jaw-bone, the orbito temporal process of the sphenoid bone, and passing under the temporal arch, inside the coronal process of the lower jaw, must have done great injury to the temporal muscle, and other soft parts, lying in

its way.

The recovery of so great a proportion of the wounded may in a great measure be attributed to the following causes: First to the purity of the air. The patients were ranged along on the upper deck, with no other shelter from the weather, than a high awning to shade them. They continued in this situation for a fortnight, and when taken on shore, were placed in very spacious apartments, well ventilated. Secondly, to the supply of food best adapted to their cases, as fowls, fresh meat, milk, eggs and vegetables in abundance. The second day after the action, the farmers on the Ohio shore brought along side every article of the above description, that could be desired. Thirdly, to the happy state of mind which victory occasioned. The observations which I have been able to make on the wounded of three engagements, have convinced me, that this state of mind has greater effect, than has generally been supposed; and that the surgeon on the conquering side will, caeteris paribus, always be more successful, than the one, who has charge of the vanquished crew. Lastly, to the assistance rendered me by Commodore Perry and Mr. Davidson. The latter gentleman was a volunteer soldier among the Kentucky troops, and engaged to serve on board the fleet during the action. After the action he rendered the wounded every aid in his power, continuing with them three months. And the Commodore seemed quite as solicitous for their welfare, as he could possibly have felt for the success of the battle.

Case of apparently Vicarious Menstrual discharge. By Joel Lewis, M. D. Of Piltsburg, Penn.

RARLY in the month of May, 1815, Mrs. G. aged 58, applied to me for professional actain applied to me for professional advice, and gave the following history of her case. In June 1806, six months previous to the cessation of the menses, she was exposed for seventy-two hours, in descending the Alleghany river, in a small skiff, to a heavy and incessant rain, without any other covering than a blanket. From this time she was afflicted with erratic pains, sometimes appearing to be rheumatic and at other times to arise from wind in the bowels, for three years; when a small indurated gland was observed in the right mamma. This gradually increased till the summer of 1812; when it was as large as a pullet's egg, and discharged a bloody coloured fluid from the nipple. From this moment all morbid sensation was completely absorbed from the other parts of the body, and concentrated in the diseased breast. The pain there, was constant, and a few days previous to the discharge, which was as regular in its monthly appearance as the menses had been, it was exceedingly severe, and of the lancinating and burning kind, and accompanied with a stricture of the integuments, extending nearly across the anterior part of the thorax. The disease continued in this form, while the tumour was gradually increasing in size, till early in the autumn of 1814, when the discharge ceased. From this period till within a few days of the operation the pain was excruciating and the tumour had an unusually rapid growth attaining to nearly double its former size. Its colour was now of a dark leaden hue, and exhibited an alarming appearance. After mature deliberation there appeared to me no other means of relieving my patient but by excision, which I strenuously advised. The operation was performed on the eighteenth day of May, in the presence of two physicians and several pupils. The tumour was excised in less than two minutes, and the dressings were completed in twelve minutes. We supposed that not more than a gill of blood was lost during the operation. For a few hours there was a considerable smarting of the wound; but afterwards she complained of no uneasiness whatever and no unpleasant symptoms supervened. On the third day she sat at the table with her family, and on the sixteenth was discharged cured. She now-attended to her domestic concerns, and declared herself to be in better health than she had been for many years previously. Four months have elapsed since the operation and she continues perfectly well. The tumour

weighed twelve ounces. It was punctured and six ounces of a fluid, perfectly menstrual, flowed out. A free incision was then made into the tumour and presented to our view a large sac, whose sides were nearly as thick as a cent, and in the bottom of which was situated a diseased gland of the size of a hickory nut. This gland was somewhat circular, but irregular in its form and ragged about the edges. It was evident that this morbid gland originated the disease; and the sac increased with the quantity of the secretion, until it reached the size above mentioned. The secretion was put into a phial and kept for several days, during which time it was submitted to the inspection and examination of several medical friends, who coincided with me in the opinion, that it was unquestionably the menstrual fluid.

Remarks.

This is the only instance within my recollection, on medical record, of vicarious menstrual secretion. There are many instances of vicarious hæmorrhages from the nose, the lungs, the nipple, the hæmorrhoidal veins, the stomach, the bowels, and even the gums. The advocates for the sanguineous nature of the menstrual discharge place much reliance upon this fact. To prove the futility of such reasoning, it is only necessary to state, that this is a favorite mode, by which nature relieves the system of the morbid irritability, sensibility and repletion, consequent to the suppression of any important secretion, or any customary discharge, which becomes important from habit. A scirrhous liver or spleen or pancreas, the too sudden checking of an habitual alvine discharge, and the healing of old ulcers, have all been the cause of hæmorrhage. what visionary speculator could believe, that these discharges, although clearly vicarious, are discharges of bile, of pancreatic juice, of alvine secretion, or excretion of purulent matter, in their respective cases? Such a belief would not be more absurd and ridiculous, than that of those physiologists, who declare the menses to be a sanguineous discharge, because in obstructed menstruation, hæmorrhages are occasionally vicarious. In the case of Mrs. G. we have an indubitable instance of vicarious secretion. The discharge was as regular as her menstruation had been, was precisely similar in its appearance and in its being incoagulable, and its elaboration was effected by a glandular apparatus. Like mentruation, this discharge varied in duration and quantity. The same symptoms of nervous irritation, which preceded menstruation, preceded

this discharge also. The stricture of the integuments, extending nearly across the anterior part of the thorax, the lancinating pains, the heat of the parts, the chorded sensation emitted to the fingers on pressure, the depression of spirits, and the languor of body, are abundant testimony of the increased action, irritability and sensibility of the part, all of which were essentially necessary to the elaboration of this fluid. The importance of this function is further proved by the constant and powerful efforts of nature, for so long a time to establish it, and by its completely relieving all the nervous symptoms, with which she had been previously afflicted. In the autumn of 1814, this function became obstructed, and her former complaints returned with increased violence. Small and frequent hæmorrhages from the nose, mitigated in a slight degree her sufferings, till their final removal, by the operation.

[The following case is from the Continental Medical Repertory for March, 1817.]

R. HINTZE of Waldenbourgh in Silesia observed the following case of menstruation through the mammæ. A young widow, mother of two children, one six, the other ten years of age, of a delicate constitution, of an ingenious mind, and a strictly moral character, always regular in menstruation, catching cold whilst unwell, the catamenia stopt, without producing any disagreeable effects for the time. The next period the menses appeared, they came from the nipples of the breast, without any further change in her health, excepting a transient oppression on the organs of respiration. Emenagogues of all description had been used in vain for many years past, the catamenia kept regular to the abnormal place, till she began using the Altwasser waters, when in seven weeks time, after twenty-seven bathings, they were restored to their natural place.

Observations on the Internal Use of Nitrate of Silver. By WILLIAM BALFOUR, M. D.

[From the London Medico-Chirurgical Journal.]

CASE 1.

On the 14th of August, 1816, Mr. A. applied to me, oppressed with a variety of very distressing complaints. The leading features of these were, general debility; debility

of the inferior extremities, approaching to paralysis; complete relaxation of the sphincter ani; prolapsus of the gut, accompanied with frequent loss of blood; and a perpetual and copious gleety discharge. He dated the commencement of his complaints fourteen years back. Had put himself under the care of some of the most eminent practitioners in this city; from whom he derived no benefit. He afterwards went to London, for the purpose of consulting the late Dr. Beddoes, who guessed the cause of his complaints the moment he saw him walk. Dr. Beddoes asked him if ever he had received an injury in the back? The patient declared positively he never had. But, upon the doctor's insisting on it, came at last to the recollection of having been struck forcibly on the lumbar vertebræ by the shaft of a gig, a short time before he began to complain. From Drs. Beddoes and King, the last of whom was likewise consulted, he derived no further benefit than what resulted from the application of ligatures to some vessels of the rectum, by which hæmorrhage was checked to a

very considerable degree.

Mr. A. applied to me in the hope of profiting from those means, by which I had succeeded in restoring some rheumatic gouty limbs, as detailed in my Treatise on Rheumatism. began with gentle percussion to the sacrum, the glutei muscles and the course of the sciatic nerve; with the view of exciting the action of the nerves supplying these parts, and of eliciting a transmission of nervous power from the spinal marrow. This operation was soon followed by increased command and power of the limbs; but had not been repeated above three or four days, when an increased discharge of blood from the rectum took place. Till this occurrence, indeed, I was kept in ignorance of the state of the anus, having my attention directed to the imbecility of the limbs solely. I now gave up the idea of percussion as impracticable, and prescribed the most powerful liquid astringents to the bleeding surface, which was quite exposed to view, but with little or ino effect. The patient requested me "to take up the veins as Dr. King had done," but I could perceive nothing but an oozing from an extensive surface. I had now recourse to nitrate of silver as an internal astringent, in the quantity of a sixteenth of a grain three times a day. I was agreeably surprized when, after two or three days had elapsed, the patient informed me, the sense of fulness, which he always perceived to precede a discharge, had totally left him, and that the discharge itself, of blood, was also greatly diminished. In a short time, the

bleeding ceased altogether, and the gleety discharge also began to be sensibly diminished. I wished, at this period, to increase the dose of the medicine, but found it impracticable, on account of the excessive perspiration it occasioned—an effect this, which was not, a priori to be expected. But even with the minute quantity of a sixteenth of a grain three times a day, sometimes only twice a day, and sometimes omitted altogether, the gleety discharge had, in two months, ceased almost entirely, the sphincter resumed its functions, and the anus contracted and puckered in the natural way.

Such mighty effects may be considered by the reader as out of all proportion to a cause apparently so trifling; unless he is disposed with me, to infer, that the nitrate of silver, as an internal remedy, has hitherto been overlooked, and its powers under-rated. It cannot be supposed, that three sixteenths of a grain of nitrate of silver could come in contact with the whole surface of the intestinal canal. Had it even been applied directly to the bleeding surface, I am convinced it would have had no beneficial effect. The effects produced

must, therefore, have been through the system.

CASE 2. Helen Thomson, aged 32, of a cadaverous countenance, and whose cousins and sisters all died of consumption, came under my care on the 9th of January, 1817. She complained of great general debility; of profuse perspiration on the slightest exertion; of frequent giddiness, especially on turning quickly round; and of a sense of weight in the back

part of the head.

The state of the pulse I could not satisfactorily ascertain, as I never saw the patient but after, what was to her, a long walk. From the history she gave me of her family, more than from her present symptoms, I considered this woman gone. I prescribed two dozen of pills, each containing an eighth of a grain of nitrate of silver; one to be taken morning, mid-day, and evening. On the 19th she returned, quite delighted with the beneficial effects of the pills. I now ordered them of one fourth of a grain each; and she continued taking three a day till about the end of February; -in all, eight dozen. She had now recovered her strength; the sweatings were checked; and she could do her work, being a servant, with perfect ease. I saw her again in the street, about the middle of summer, full of flesh, and apparently in perfect health. With the exception of a laxative pill, occasionally, this patient had no other medicine than the nitrate of silver; and she described its invigorating effects as almost instantaneous.

CASE 3. Mr. William Elliot, aged 19, came under my care on the 20th of October, 1816. He had been complaining for nine months back, of pain in the breast, attended with cough and dyspnæa, the latter attacking him in paroxysms almost to suffocation. Had had a good deal of medicine from different practitioners, but found himself getting weaker daily. He was now, indeed, very much reduced, and unable to take much exercise in the open air. I was called in to him at first in a great hurry, owing to his being suddenly seized with a most violent stitch under the short ribs, right side. From the state of his pulse, I was no way apprehensive of inflammation, therefore satisfied myself with the application of percussion for two minutes, by which he felt himself greatly relieved, and was enabled to turn himself any way he pleased. In about a quarter of an hour he became very sick, and vomited a quantity of greenish yellow substance, very offensive to the taste, and was immediately and entirely relieved of all his complaints. I ordered an aperient medicine. On the 4th of November I was again called in a very great hurry, and found the young man labouring under a tremendous fit of asthma, with a frequent, full pulse, and considerable heat of skin. I took fourteen ounces of blood from the arm, with some relief of symptoms. Next day he had another paroxysm of asthma,. when I ordered him a grain pill of opium. This had the desidered effect, not only at this time, but ever afterwards; nor was it ever necessary to increase the dose of opium. One grain, taken when a paroxysm was threatened, completely checked it. Finding, however, that debility, emaciation, and sweating continued, I began, on the 25th of November, with the nitrate of silver, in the quantity of a sixteenth of a grain twice a day, or, as sweatings occurred. This had the effect of moderating the sweating. On the 9th of December, I increased the dose to an eighth of a grain, to be taken at any time, by day or night, when menaced with profuse perspiration. On the 11th December, the dose was increased to a fourth of a grain. The patient's strength was now evidently improved, and he checked the sweatings at any time by taking one pill; nor was the asthma or cough at all troublesome. He continued the nitrate of silver pill till about the end of June, a rhubarb or aloetic pill being now and then interposed to keep the bowels regular, as the nitrate of silver had rather a constipating effect. Every symptom of disease had now disappeared; the patient had recovered flesh, strength, and a healthy appearance. I considered his recovery complete. About the middle of September, however, he was seized with

heartburn, which, in a few hours, was succeeded by vomiting a considerable quantity of a dark coloured substance, so thick and tenacious, that it might have been suspended on a stick. Upon this, the patient was again perfectly well; nor did any of his former symptoms return. I ordered him some laxative medicines, but the same phænomenon recurred repeatedly at short intervals. I had now recourse to the blue pill as an alterative, and with the happiest effects; of these he took five dozen in the course of September and October, when he gave over all medicine. Through the course of the succeeding winter, he had few complaints, and used as little medicine. On the approach of spring, however, he was again, menaced with a return of heartburn and asthma; symptoms which were immediately checked by emetic tartar, exhibited in the form of pill, and in the quantity of a fourth of a grain at bed-time, as occasion required. If there was any affection of the liver in this case, the blue pill seemed to have a good effect on it; but emetic tartar a better: and I regret much I did not exhibit this latter medicine sooner. I cannot but attribute, however, the first check the original complaints received to the nitrate of silver.

Case 4. Mrs. W. a married lady, about 36 years of age, of a fine delicate complexion, and who never had any children, consulted me in May 1817, with regard to fluor albus, under which she then laboured, and to which she had been occasionally subject for some years. I prescribed a lotion, as the acrid nature of the discharge occasioned some uneasiness, and the nitrate of silver pill. She took only two dozen of one-fourth of a grain each, when the discharge disappeared. My patient was very much surprised at the decided effects of the medicine, as she had been, on a former occasion, under the care of an eminent Surgeon for the same complaint, and experienced little relief for a great length of time, although she used a great deal of medicine internally.

Case 5. On the 2d of August 1817, I was consulted by letter, in the case of Mr. Thos. Coutts, Kinross-shire. Five weeks previous to this, Mr. Coutts was seized with cough and spitting of blood, which continued for a week, when he was bled in the arm to the amount of "fourteen or sixteen cunces." In a few days the spitting of blood returned, when a blister to the breast had the effect of again stopping it. The patient was extremely weak, and had little or no appetite. Pulse ranged from 80 to 95. I recommended the nitrate of silver, one fourth of a grain, four times a day. On the 20th I had a return from the patient himself, stating, "I cannot say much

yet, only my stomach is better, and my breathing a little more free. I sleep fully as well, and do not sweat in the night so much. What I spit is not so gross; it is more mixed with spittle, or something the appearance of common spittle." On the 10th of September, after complaining of being much harassed with cough, he says, "I have taken three pills every . day, finding four too many for me; but as they are the best thing that I have got, you may send me another box or two." I now desired the patient to give up the pills for a few days, in order to ascertain if they were of any real benefit. advice he complied; and on the 17th informed me, "I tried to want the pills, but it would not do. I did not feel much the first day, but the second I was very bad in my breathing, and could not say how in my inside; so I began again, three in the day." On the 15th of October he requested me to send him another box of pills, adding "perhaps I may not need any of them; but if I do, (meaning if he lived) I cannot want them. You will be sure to send it this week." He died in about ten days after.

It is evident, from the patient's own account, that in his case the nitrate of silver obviated the formation of pus, and improved its quality; that it checked the hectic perspiration, and facilitated perspiration by supporting the tones of the

system.

CASE 6. Mr. S. about 36 years of age, of a strongly marked scrofulous habit, and having had for many years a copious purulent discharge from the lungs, and difficult respiration, was attacked last summer with what is deemed confirmed consumption. After being greatly reduced, and confined for some time to the house, he came abroad again, still discharging immense quantities of purulent-looking matter, of a bad smell and taste. His return to the world was considered by his physician, and with much reason, a temporary respite only. About the middle of July he consulted me, and I instantly put him upon nitrate of silver, a fourth of a grain four times in the day. Having taken three dozen of pills in this way, he returned for a supply; informing me that the sputum was reduced in quantity, and entirely deprived of its bad taste and smell; and that he now coughed with a vigour, and expectorated with a freedom, to which he had been long a stranger. In the beginning of August he went to the country, carrying along with him twenty dozen of the pills, which he was directed to take as he found them affect him. He returned to town in the beginning of October, much improved in

every respect, and having exhausted his stock of pills. He now took other four dozen, when he dropped them altoge-

ther, having no further occasion for medicine.

I will not say, that in this instance nitrate of silver cured phthisis; but from the authority of the patient, and the testimony of my own senses, I affirm, that the quantity of sputum was diminished, and its qualities improved; and that a tone and vigour was communicated to the constitution, which no other medicine with which I am acquainted, could have

imparted.

Case 7. Mrs. Simpson, aged about 30, of an extremely fine complexion, and delicate frame, consulted me in November last, with regard to her general health, which was much impaired. She exhibited, indeed, the appearance of being far advanced in phthisis. I found she had laboured for some time under fluor albus; and that the discharge was copious, extremely acrid, and accompanied with distressing pain in the region of the uterus. I immediately put her on the nitrate of silver pill, with immediate and great good effect. The pain went off in three days, and the discharge was lessened in proportion. In less than a fortnight she felt her strength considerably improved, and in every respect much amended. She continued the medicine about a month, at the end of which she was perfectly free from complaint. I cannot, indeed, convey an adequate idea of the change, for the better, produced on this interesting and delicate female:

Case 8. Mrs. M. who had been married several years, but had no children, tall, slender, had constantly an eruption all over her face of a fiery red, and who had not menstruated for several years, became subject to an abscess in a particular spot, within the left labium pudendi, of frequent recurrence. She underwent three courses of mercury, but the complaint perpetually recurred. At length, I prescribed nitrate of silver with the happiest effects. Not only did the discharge disappear, and the ulcer heal up kindly, but the whole habit of the patient seemed to undergo a revolution; her face even became less fiery and red, symptoms of the return of the catamenia began to manifest themselves, and she felt herself better than she had been for several years before. It was with some difficulty I could persuade this patient to drop a medi-

cine from which she had experienced so much benefit.

Case 9. A lady, advanced in life, was seized with a pneumonic affection, accompanied with colliquative perspiration. As soon as the pain of the chest was subdued, which was effected without blood-letting, and that the patient could make

a full inspiration, nitrate of silver was exhibited. The perspirations were immediately checked, and the strength of the

patient was quite restored in a short time.

Case 10. A young man was attacked with slight, obtuse pain in his chest, for which he took advice, but of what nature I know not. When I was consulted I found him much reduced by colliquative perspiration. This was, indeed, his only complaint: and the nitrate of silver removed it entirely

in a very few days.

I have exhibited nitrate of silver in obstinate gleets from gonorrhea; and in many instances with perfect success, after all the usual remedies had been tried in vain. I have likewise failed in some cases; but believe it was more owing to the medicine not being carried a proper length, than to its inefficacy. In some cases I have made a cure in a very few days; in others, a considerable time elapsed before much effect was produced: One gentleman had been repeatedly under my care for gonorrhea, which in every instance was difficult of cure. The patient had a cadaverous, unhealthy appearance. The last time he consulted me, I prescribed nitrate of silver, after the inflammatory symptoms were subdued, and with immediate good effect. Not only was the discharge quickly dried up, but the patient described himself as having acquired a tone and vigour to which he was formerly a stranger. was with difficulty also that this patient was persuaded to give over the medicine.

Such are some of the effects I have observed from the internal use of nitrate of silver—effects which entitle it to more attention than has yet been bestowed on it. From the preceding statements, it is evident, that it possesses anti-purulent powers in no common degree; and, that in deprayed and relaxed habits, it is a remedy that has no rival.

W. BALFOUR, M. D.

Some Remarks on Lues Venerea. By Henry Robertson, M. D.

[From the London Medical Repository.]

FEW years ago I commenced a series of essays on lues venerea, with the view of publication: the first was inserted in the Madical Repository for August and September, 1814. But my situation with the army in the Mediterranean obliged me to renounce my intention, owing to the dif-

ficulty of getting voluminous papers conveyed to England. On my return home lately, I find a sort of critical observation on the concluding sentence of the essay that appeared in the Repository; implying, as it would seem, that what I had stated of lues venerea, had been made without sufficient consideration or experience. My words are, "in every country the disease is acquired in the same way; its leading symptoms are the same, and it yields to the same kind of treatment." Now, as the additional experience of some years has not produced any change of my ideas, as thus stated upon that disease, I shall therefore enter a little more fully into the grounds of my opinion, with the hope that they will find a place in the Medical Repository.

Before my essay was written out for publication, I had been with the army in Portugal from two to three years; and having been for a considerable time attached in my duties to the office of the Physician-General at Lisbon, I had ample opportunities, by my acquaintance with the professional gentlemen of that city, and in my occasional duties at the principal Military Hospital there, to perceive the consequences of the common practice for the cure of lues venerea in that country. Through every part of the Peninsula I have been in, there is a prejudice against the use of mercury in whatever form it is administered for the cure of the venereal disease; but this seemed to me to be more the notion of the vulgar, than the result of professional experience: the well-educated medical gentlemen I spoke to on this point, seemed to be convinced of the utility of mercury in that disease: they are only more sparing in its use than British practitioners are in general. The dislike to mercury prevails in a greater degree among the inhabitants of the south of Portugal than any where else I have been. It is probably to this cause chiefly that we see more distorted and mutilated objects in the streets of Lisbon, than in any other capital of Europe: and to the prejudice against the use of that mineral, and the comparatively slow progress in the system of lues venerea, owing to the mildness of the climate, an opinion has originated among the natives of hereditary poxes existing in certain families among them.

Every person who has attended to the subject, is aware that the venereal poison does not make such rapid progress in the natives living in warm climates, as in the inhabitants of more northerly latitudes; but that primary symptoms of the disease heal up without the use of mercury, is neither peculiar to Spain nor Portugal. I admit the occurrence may be much more frequent there; yet I have met with similar cases in

different parts of this country. But in no case have I ever known, where the neglect of the subsequent use of mercury was not followed by constitutional symptoms; and notwithstanding the advantages of climate, the Portuguese do not escape with impunity when their prejudices carry them so far as entirely to omit the use of this medicine. Indeed I have reason to believe, that more people die in that country of the venereal disease, or its consequences, than any where else in The number of pocky cases seen daily in the streets of the capital, was a frequent subject of observation with my Some cases of that kind I pointed out to Dr. William Robson, in 1811, now physician to the forces at Ceylon. One of these, a woman affected with a lepra, who kept an orange stall opposite the arsenal, very rapidly got worse as the winter set in, when she entirely disappeared. At my last visit at the Guillo Hospital, I saw no fewer than three cases of marasmus that appeared to be venereal; and upon that occasion I could regularly trace the lues venerea as the cause of the diseases of a great proportion of the men who came before the board for examination. Rheumatism is also a very frequent complaint among the Portuguese soldiery in the cold weather; and many of those cases were decidedly found to originate from a vene-The general bad formation of the thorax, and the tibia among the Portuguese, I have heard imputed to the same

I have likewise been informed, that the foregoing observations are generally applicable to all the Portuguese settlements. Nevertheless, from what we learn from Golberry, Niebukr, Jackson, Volney, &c. we are not to consider that the Portuguese is the only nation where such appearances, from the neglect or improper treatment of the venereal disease, are met with. In the south of Europe, where I have been, I have uniformly found that the frequency of lepra, and other chronic symptoms of lues venerea, are always in proportion to the treatment of the primary symptoms with mercury: wherever that medicine is entirely omitted, or too sparingly administered, then the constitutional symptoms are most common.

One of the medical officers of a foreign regiment, stationed in the Mediterranean, used to treat the men on detachment, who had primary sores, without the use of mercury; yet, notwithstanding the fine climate, their very intelligent principal surgeon used to complain of the number of men with confirmed dues he always had in the regimental hospital from this cause.

The common prejudice of the Portuguese against the use of mercury in lues venerea, accords with an opinion held by all

ranks of the inhabitants of Cephalonia, regarding the employ-

ment of sulphur for the cure of the itch.

The inhabitants of that island are said to amount to 60,000, and certainly it is not an over-statement to calculate the proportion of those affected with psora, as one third of that number; nevertheless, the use of sulphur for the cure of that distemper is totally inadmissible by them. I did every thing in my power to correct that prejudice, by adducing our practice in that class of patients among the soldiery—but in vain.

The consequence is, that many, during their long summer, by the use of bathing do get rid of the disease; but I have also been informed of cases even among the better sort, where the disease (and the preposterous treatment of it, perhaps) had so affected the constitution, as to produce a fatal termination.

It will readily be inferred from what has been premised, that my opinion is formed respecting the utility of mercury in the cure of lues venerea. At the same time I must observe, that although I am convinced, by experience, of the superiority of mercury over all other antisyphilitic remedies, I am of opinion that no remedy has been so injudiciously administered in the whole circle of medical practice, as mercury for the cure of the venereal disease. The indiscriminate and excessive proportion, in which it has been commonly prescribed, has in a multitude of cases defeated the intentions of the practitioner, and ruined the health of the patients. The most difficult cases of constitutional lues I have had to treat, have been people, who have originally suffered from the excessive quantity of mercury administered to them: without one exception they have all undergone a greater or less degree of salivation. In this way I imagine that the medicine has fallen into disrepute, and given origin to many fanciful ideas about the venereal disease.

It is now fully eighteen years that I have known the pernicious effects of what is called a course of mercury; since that period I have been very sparing in the quantity of that medicine prescribed. I have not in any cases directed mercurial frictions in the venereal disease, with the view of affecting the system in that way; or which would not have been equally applicable, for the same symptoms, originating from any other cause. I have not in that time confined a patient merely on account of the medicine employed; and I do not recollect having had a case terminate in a constitutional affection, either in this country, or in any other I have been in, when I have had the treatment of the primary systems; or one instance where I have failed of a cure, or where the health has been injured or affected by the medicine. And I appeal to the medical public whether

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this is not a degree of success, equal to what might be expected from the most favourable result of the administration of sarsaparilla, or any other medicine of equivocal virtue in the disease in question. However useful those remedies may be as auxiliaries in the cure of syphilis, it was not without the full conviction of experience that our professional predecessors gave a preference to mercury in the cure of that disease.

Being convinced of the entire efficacy of mercury, and its harmlessness when introduced into the system in moderate proportions for the cure of lues venerea; I have consequently no sort of experience of the oxide of gold, so boasted of as an antisyphilitic remedy in some places of the south of Europe. it my intention to adopt that or any other remedy directly in the cure of lues venerea, till its virtues shall be decidedly ascertained, and till it is found to be equally certain and less hurtful to the constitution, than the medicine it is intended to supplant; or until I find that mercury fails in its effect, or is otherwise an improper remedy. It is neither from what I have seen in Cephalonia, nor in Portugal, that I should be persuaded to give up the use of sulphur and mercury in the cure of the diseases for which they are known to be specifics; and trust to articles of less active, and more uncertain powers in these cases.

Even upon the most implicit admission that diseases of the generative organs, and of the system which strongly resemble the lues venerea in their appearances, are frequently met with, yet produced by other causes; we are assured, by the practice of one of the most distinguished supporters of that opinion, that small doses of mercury are even necessary in many of these spurious cases, and that no bad effects follow its use in any of them. Therefore, if it is, as I believe, the general opinion of the profession, that the use of mercury is the only remedy to be trusted for the cure of syphilis; it follows that this medicine should be had recourse to in the cure of both those classes of disease: at least till a distinction can be pointed out between the true and spurious affections. This however is a point that I imagine requires more ingenuity and talent, than have yet been exercised in support of the opinion, so as to determine it to the conviction of the unprejudiced observer. The authority of Celsus, or any other ancient author who treats of diseases of the genitals, does not avail in this case. The loose and unconnected description of those diseases, are the necessary consequence of the author's unacquaintance with the circulation, and of the functions of the absorbent vessels.

Without this knowledge, how was it possible to trace swellings of the inguina, diseases of the skin, or bones, ulcers of the throat, or other marks of constitutional disease, as occasioned by a primary sore on the glands?—Celsus no where imputes the diseases of the genitals to a pure or impure connexion; are we therefore to conclude that the sores of the genitals he describes were of spontaneous origin, and in no way depending on such causes as produce similar affections in the present day? I have some pretensions to experience in the disorder in question, but I have never met with an equivocal case, where its origin could not be distinctly traced, or which was long in putting on decided marks of its real nature. Neither have I met with, in my own practice, or seen in that of others, any greater variety of the symptoms of lues venerea, primary or constitutional, than we are warranted to expect from the different modes of life, the occupations and various constitutions of its victims. The appearances of this disease vary in different seasons; and vary according to the occupation of the patient. Therefore, taking into consideration the comparatively slow, and general effect of the venereal poison; rendering the deranged state of the functions consequently more permanent; I do not see that its symptoms are either more diversified, or less distinctly marked than those of any other acute or chronic disease.

When a regiment is exposed to the causes of fever, the then affected, although from their duties, mode of living, and other obvious circumstances, they more strongly resemble each other, than what is perhaps found in any other class, have not uniformly the same symptoms: on the contrary, it often happens that the true nature of the disease is marked in a majority merely by some leading feature of the complaint.

The same is the case of plague when it gets into a city or country, and the same thing is still more appositely marked in the symptoms of scurvy and scrofula: is it then to be inferred, that every obscure case of lues venerea, that deviates from the common symptoms of that disease, is to be considered as the effects of a new poison generated in the system, requiring new remedies to remove it, because, forsooth, our limited knowledge of the animal economy does not enable us fully to account for them? In every case I have seen, which, from the similarity of symptoms, has been mistaken for a variety of the venereal disease, mercury has always proved pernicious in its effects, and that too immediately, and when administered in very sparing proportion. On the other hand, purely venereal cases, however dubious in appearance, or re-

sembling other diseases, undergo a beneficial change by the use of that medicine. I shall not detain the reader longer on this copious subject; and will conclude by an extract of three cases, which will elucidate the opinion I have laid down above. Many years ago I was requested to visit the workman of a considerable hat manufacturer, who had been refused admittance into the city infirmary, as he was apparently in a dying state. I found this young man in the most deplorable emaciation and debility; upon different parts of his skin there were several large foul ulcers, even of the size of the palm of the hand; one of the sores, seated upon the trochanter of the right thigh, had penetrated so deep, that the bone was visible; the stench from the discharge was most offensive; his appetite much impaired; his mind sunk into a state of insensibility: he altogether presented a spectacle the most deplorable I had ever seen. Contrary to my expectations, he recovered his health by the use of mercury. The cause of his illness was a chancre he contracted about six months preceding, which had healed by washing it with sugar of lead water. He was a person of dissipated habits. A few weeks before I saw him, he had an attack of fever, to which gradually succeeded the state I have slightly sketched. Towards the end of summer, 1807, I was taken by a respectable surgeon of Liverpool, to visit a patient of his, whose history is shortly as follows.— This gentleman had (I believe for the first time in his life) got a slight chancre in the preceding spring, which soon healed by topical applications: upon this there supervened a similar painful swelling in the glands of each groin, for which he was recommended to rub in mercurial ointment: at this period of his complaint he was under 'the necessity of undertaking a considerable journey on horseback: this exercise occasioned an universal soreness of his limbs, and the buboes disappeared. On his journey he was as attentive as he could be in rubbing in the ointment, but his mouth never became affected: after an absence of about a month, he returned, seemingly free from disease: soon after this he began to complain of headach, which gradually increased in severity, and without intermission. This affection was attended with the usual symptoms of a determination of blood towards the head, and treated accordingly. By this means his complaint was somewhat relieved, but never left him so entirely as to allow him to enjoy society; and the pain began to increase soon after the evacuations had been left off. Upon this account of the matter I began to suspect that the headach might probably be in consequence of the absorption of venereal poison

from the chancre; an opinion that seemed probable, by being informed that he occasionally suffered pains in his limbs at night; that there were also a few slightly discoloured spots on the scalp, and that his hair was beginning to fall off: he was accordingly treated by small doses of mercury, which in a very short period produced a radical cure. These two cases show, in my mind, the consequences of healing venereal chacres without mercury. I shall next give a very short case of the same class, that, in my apprehension, had been occasioned by a badly treated gonorrhæa, or it may be called the consequence of an adventitious poison: on either opinion, it supports my argument. This paper is already too long, otherwise I could illustrate the subject by many similar cases.

A captain in one of our foreign corps in Malta became gradually affected with fits of giddiness, loss of memory, and occasional headach: his complexion was sallow and unhealthy, with considerable emaciation and debility. For these complaints he was sent to England for the recovery of his health; where, soon after his arrival, all the symptoms were so aggravated as even to threaten derangement of his intellect. I met this officer accidentally at his friend's house, in Marlow, in spring, 1808; and after a careful examination of his case, and perceiving a slight node on the right olecranon, my opinion of the venereal nature of his complaint was decided. Although he declared he never had a sore or chancre in his life, he admitted he had been frequently affected with running, for which he had been his own doctor.

By persisting in the use of mercury, he completely regained his health in the course of a few months.

H. ROBERTSON.

2, Conduit Street, Hanover Square.

Observations on the successful Treatment of Syphilis, in its primary stage, without Mercury. By Thomas Alcock, Member of the Royal College of Surgeons, Accoucheur and Apothecary to the Saint James's Infirmary.

[From the London Medical Repository.]

A BOUT fourteen years ago, a young gentleman placed himself under my care, who, from peculiarity of situation, refused to employ mercury for the cure of a large ne-

glected chancre. On this account the surface of the sore was repeatedly destroyed by escharotics; and under this treatment it not only became clean, but granulated and healed rapidly. In this case secondary symptoms might have been expected from the long continuance of the sore before any curative means were adopted; but, contrary to my expectation, none occurred. The termination of this case induced me to propose the practice in others, when early consulted, and where the character of chancre was well marked; at the same time stating to the patients the possibility of secondary symptoms, and leaving the choice of this or the usual mode of treatment to their own determination; * and during the last ten years I have frequently used this practice, and have not once had occasion to regret the result. In pursuing this plan, however, I am persuaded that the treatment should be used as early as possible, the risk of the absorption of venereal virus being in proportion to the time which the primary symptoms have continued; yet, as the instances of constitutional disease, without the intervention of bubo, are extremely rare, we have no proof that absorption has actually taken place, without this intermediate sign. † Within the first week of the appearance of chancre, where the disease was confined to that symptom only, I have not hesitated to recommend

^{*} Deviations from established practice, when that practice leads to recovery, can only be justified by a strong probability, supported by evident fact, or reasonable induction, that the proposed innovation will be to the advantage of the patient; nor should any such innovation be adventured, without the patient's full concurrence, after the means, and object to be attained, have been fairly submitted to his judgment, the probable disadvantages, as well as advantages of the proposal being explained. When narrowed to this compass, it requires no more than common sense, and a mind free from prejudice, to decide rightly. Without these considerations, it is to be feared that innovation becomes mere experiment, which no zeal for the improvement of science can justify. The surgeon cannot, with moral propriety, put to hazard the welfare of any patient who confides in his care for the benefit that may thence result to others: and in situations of public trust, where circumstances render the sufferers incapable of choosing their professional attendant, this maxim cannot be too deeply felt, too conscientiously regarded. When, however, established modes of practice are found to be unsuccessful, the practitioner is not only at liberty to revise the treatment, but in duty bound, faithfully and sedulously to investigate the disease in all its bearings; and having ascertained as far as possible its symptoms, nature and pathology, dare to think for himself, and conduct the treatment conscientiously to the best of his judgment.

[†] Inflammation of the lymphatics, leading from the sore, in some few cases, has been observed to precede and accompany bubo, but so rarely as scarcely to need enumeration.

escharotics, and have sometimes used them later, but never when there was any perceptible affection of the neighbouring

glands or lymphatics.

Though the purpose may be answered by different escharotics, I give the preference to a saturated solution of sulphate of copper, having ascertained from repeated observation that it effectually destroys the chancre, while it is much less painful than the nitrate of silver, and its effects are attended with less inflammation and subsequent hardness. The pure potash is even less painful than the nitrate of silver, but its liability to spread further than requisite, renders its use objectionable. In employing these means, I consider some precautions to be necessary. The chancre having been washed with warm water and wiped dry, I immediately apply the solution by a camel hair pencil, or other convenient medium, to the whole surface of the sore, carefully observing that every point of the latter be included, and continuing the application of the solution from one to two minutes, till an eschar be fully formed.* Every part of the sore touched by the solution, becomes of an opake colour; and it is desirable to fill the pencil lightly at first, and when every point of the diseased surface and margin is moistened, to re-apply it more freely, till the eschar be completely made. Dry lint, or any simple dressing, may be applied, more to defend the contiguous parts, than as necessary to the treatment. If, at the expiration of the second day, the slough should not separate spontaneously, I remove it by the probe, or, if necessary, thy the forceps or scissors, and to the fresh surface repeat the application, with the same precautions as before. At the same interval of time, I have generally again repeated the application, and then allowed the slough to come away spontaneously, when the sore has generally lost its specific character, and assumed the healthy appearance of a common sore: if it should not assume this appearance, but remain foul, the solution may be once more applied. The sore is increased in size,† but it becomes florid, and divested of much of its characteristic

^{*} If the nifrate of silver be used, less time will generally be sufficient; but in all cases, the effect produced, and not the time, must be the criterion.

[†] The increase of the sore, by repeatedly throwing off its surface, will be obvious; but it is less in extent with the sulphate of copper, than with the nitrate of silver. Often the edges begin to cicatrize before the slough from the last application has separated from the centre. This is very different from its progress, if watched, before the solution has been applied; its abrupt edges extending from day to day, from a striking.

hardness; after which it heals rapidly with simple cleanliness or common dressings. When the case has been early attended to, I have known the sore healed in seven or eight days, though the usual period may be stated to be from ten days to a fortnight, rarely extending to the third week. Occasionally, however, when the sores have been on the loose part of the prepuce, they were troublesome, requiring to be dressed with stimulants. Sometimes a slight degree of hardness remains a short time after the sore is healed, but disappears without requiring any treatment; and I doubt whether as much hardness may not be observed in the cicatrix of a common sore of the same extent. I have not been able to trace any hardness at the distance of a few weeks, when I have examined patients who had been thus treated. In all the cases of primary syphilis, cured by this plan, I have abstained from the use of mercury; * and though in private practice every instance cannot be traced, yet I have observed several of these for a series of years, and, with the exception stated below, t in none have secondary symptoms supervened.

The primary symptoms of syphilis have been so long treated by mercury, that most practitioners seem persuaded, from fixed associations, that the influence of this agent is indispensable to their cure: but the facts which I have stated have convinced me of the fallacy of such an opinion; and the numerous experiments, which have been recently published, also tend to show that syphilis may be removed without the aid of mercury. In most of the cases published it would seem that the disease had been rather permitted to wear itself out than to be cured by the direct use of remedies; and it may

contrast. One of my patients, not unacquainted with the appearance of chancre, observed, that he was delighted when the grey or greenish centre of the sore turned out, and left the surface as bright as a cherry.

^{*} In the mercurial treatment of primary sores, I have trusted to the constitutional effect of that remedy only, using the sore as one of the tests of the sufficient influence of the specific. This has enabled me, by contrasting the mercurial with the escharotic treatment, to give a decided preference to the latter, in my own practice, under the precautions above stated.

[†] A gentleman, who had had a chancre destroyed by the nitrate of silver, having subsequently a sore after a suspicious connexion, thought he could manage the treatment himself, and did so; but a few weeks afterwards blotches appeared, which required a six weeks course of mercury, under which he got well.

yet be doubted what is the best mode of treatment: and as far as the results have been published, it does not appear that the allowing of the disease to wear itself out is either so short or so certain as the treatment by mercury, when judiciously conducted. But I am induced to believe, that the eradication of the disease in its incipient or local stage, by the means which I have recommended, can be accomplished in much less time than by mercury, and even without the supervention of secondary symptoms. It may, however, be useful to contrast the treatment here advised with that by mercury.

Treatment by Escharotics.

- 1. The time usually required is considerably shorter than the mercurial treatment of chancre; and in sores of a doubtful nature, where mercury often aggravates, or is at best useless, the application of the solution speedily promotes the healing of the sore.
- 2. The general health is not at all interrupted by this treatment.
 - 3. Confinement is unnecessary.

4. In some cases concealment may be necessary to the peace of a family.

Treatment by Mercury.

1. When the treatment is conducted by mercury, the cure is not to be depended on, unless the action of the mercury be kept up without interruption for a given period. In sores which are not venereal, mercury often does harm; and that doubts have arisen as to the nature of sores on the genitals will scarcely be denied.

2. Without particular pre-disposition, the digestive organs become impaired during a mercurial course; and in strumous habits, or where a tendency to disease exists in the chest, mercury is often in-

jurious.

- 3. Confinement to the house is necessary to insure the full remedial effect with the least risk of injury. When the patient is exposed to the weather, the mercurial action is often suspended or imperfectly produced, so as to render the cure doubtful or uncertain; not to mention the severe attacks of rheumatism or inflammation of the joints which have been known to follow exposure whilst under a mercurial course.
- 4. The pale looks and fetid breath render concealment difficult, the patient associating with others as usual.

Treatment by Escharotics.

- 5. Supposing the occurrence of secondary* venereal symptoms, they will yield to nearly the same course of mercury as would be used for the primary; but notwithstanding this supposition, the probability of wholly escaping is entirely in favour of the patient.
- 6. No ill effects have occurred in my practice from this mode of treatment. In irritable chancre I have found it act as the application of caustic does to the protruded iris, viz. speedily to diminish the sensibility of the part. In such cases, however, the state of the general health should not be overlooked.

Treatment by Mercury.

- 5. Mercury is known to act most decidedly and beneficially on venereal complaints the less they have been previously treated by inefficient courses of that remedy, by which their character is often much obscured, and the result rendered less certain; consequently secondary symptoms after mercury are less favourable than when no mercury has been used.
- 6. The ill effects of the indiscriminate use of mercury are well known to be extensive and dangerous; often producing consumption, or a state of ill health, from which the patient never recovers: besides, it is also known that mutilations from its abuse have been by no means uncommon.

The principle of the practice here detailed may be found in the work of Mr. Hunter, and might even be traced to a much earlier date, were the historical view of the subject desirable; but it is not the date so much, as the usefulness of the plan that forms the proper object of examination. Mr. Hunter removed a chancre by excision, and it healed as a common sore. He also mentions the use of caustics, but advises mercury to be conjoined, thereby rendering the conclusion defective. Some of my professional friends have used the caustic in conjunction with mercury, but the latter in quantity and effect much less than has been considered necessary to secure the safety of those affected; and they have noticed the rapid and satisfactory progress of such cases, without having found

^{*} By secondary, I mean the affections of the skin, throat, &c. and not those affections of the bones which are of more remote appearance, and require the mercurial influence to be maintained for a longer period.

^{† &}quot;Chancres, as well as gonorrhea, are perhaps seldom or never wholly venereal; but are varied by certain peculiarities of the constitution at the time. The treatment therefore of them, both local and constitutional, will admit of great variety; and it is upon the knowledge of this variety, that the skill of the surgeon principally depends."—HUNTER, p. 226.

that any of the patients returned for the secondary forms of the disease.

The characteristics which have been received as satisfactery evidence of the venereal chancre, are, the loss of substance, and the absence of granulations, the matter adhering to the surface of the ulcer, the thickened base, the abrupt and elevated edge, with circumscribed hardness; and in its progress, extending in every direction from the point first affected, dissimilar to the progress of other sores. Now as these characteristics were present in most of the cases which I have treated by escharotics, it cannot be fairly brought as an argument against this treatment, that the sores were not really chancres. Although I have heard many objections stated to the, attempt of destroying chancres in their earliest stage, I have not been able to trace one of these to any bad effects, which had been actually witnessed by those who objected; and, indeed, it would appear, that their objections were rather founded on some hypothetical prejudice, than deduced from actual observation.

The great importance of the subject, and the extensive scale on which the triels without mercury had been conducted, render it extremely desirable that the comparative advantages of the different modes should be as fully ascertained, and as accurately established as possible. It is not a question that can be decided in a day; for the progress from secondary to more remote trains of syphilitic symptoms is often slow and irregular; and should it unfortunately happen that those who have passed through the secondary forms of the disease without mercury, are not rendered secure, much misery must be

the consequence.

It sometimes happens that the care evinced in the prevention of diseases is very disproportionate to that employed in their cure; and perhaps the former has not obtained sufficient attention. Numerous facts tend to show that where the skin is free from breach of surface, the appearance of chancres may be very generally prevented by strict ablution. the disease actually occurs, the advantages of its speedy extinction, whilst it is yet confined to a point or points, appear to me as obvious as that a man should prefer the immediate extinction of a fire, by the timely application of a little water, rather than suffer the conflagration to extend in his dwelling, until the use of fire-engines become absolutely ne-

In the bite of a rabid animal we do not wait for the formation of the fatal constitutional disease, which is known to succeed where no local treatment has been used: on the earliest application for relief, the immediately injured and surrounding part is either removed by the knife or destroyed by the caustic; and although in parts of no great vascularity the knife appears preferable, there is yet respectable testimony sufficient to establish it as fact, that escharotics have rendered patients secure; and by a parity of reasoning, independent of the facts already adduced, it is but reasonable to infer, that if one poison can be thus destroyed in embryo, so may another by similar means.

In publishing these hints, I am aware that the ultimate value of this, or of any other mode of treatment, can only be determined by time and observation: my present object is to call the attention of the profession to what appears to me an interesting subject for investigation—the eradication of syphilis in its local and primary state, that the inconveniences, danger, and misery attendant on its protracted course may be thereby

obviated.

It often happens in the treatment of diseases, that there is less need of new remedies than of precision in the use of those already known. It has not, however, been my object in these remarks to consider the best and safest modes of conducting the mercurial treatment of syphilis, a subject well understood by those who have devoted a fair portion of practical attention to this disease; and the certainty with which mercury subdues syphilis, under judicious management, admits of very rare exception. Notwithstanding these facts, the numerous cases of secondary and more remote forms of lues met with in this metropolis, sufficiently prove that the manner of conducting the mercurial treatment is not so universally understood, nor so carefully followed as its importance deserves, ample allowance being made for the inattention of patients themselves. Hence I am persuaded, that should any correspondents, through the medium of a Journal so widely circulated as the MEDICAL REPOSITORY, briefly and practically illustrate this subject, it would neither prove useless to some part of the profession nor to the public.

^{4,} Piccadilly.

REVIEW.

Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London. Vol. 3. Part II. pp. 618.

[From the London Medical Repository.]

which issue from the press on medical topics, were equally pregnant with matter with those volumes which are published at stated periods by the Medical and Chirurgical Society. Of the constitution of this society, and whether it might not be improved by a little more resemblance to the conversational, debating form of the body from which it originated, different sentiments may be held; but respecting the value and importance of their published Transactions, unprejudiced opinion cannot fail to be unanimous, and we shall consider ourselves happy in embracing the periodical opportunities which these publications furnish us, both of acquiring information ourselves, and to the utmost of our abilities and limits imparting such information to our readers.

The first paper in the Part now before us, is constituted of a very interesting dissertation on the Pellagra, by Dr. Holland, a disease apparently the result of a distinct morbid poison which somewhat resembles in its peculiarites the Elephantiasis of authors, and which is confined to a particular district in the south of Europe. It is known that Trapolli first publicly described this distemper in a tract, which was published at Milan in 1771. The pellagra, Dr. Holland informs us, is a malady confined almost exclusively to the lower classes of the people. The patient first perceives on the backs of his hands, or feet, or sometimes though more rarely, on other parts of the body exposed to the sun, certain red spots or blotches. These spots are rather more obscure, and of a more dusky red, than After they have lasted for some time, small tuerysipelas. bercles arise out of them, which end in desquamation and

thus for the first year the disease goes off. With these local complaints are connected, even in the first instance, symptoms of constitutional, and what are generally termed nervous derangements; but there is no fever. In the ensuing spring these symptoms usually recur with more severity, and now the skin becomes callous and deeply furrowed, assuming the appearance of inveterate psoriasis, or lepra vulgaris; and the constitutional affections are also much more severe. Our author did not find the accompanying libido inexplebilis, about which there has been so much controversy in relation to the lepra or elephantiasis. In the third year the symptoms, both constitutional and local, increase in severity, and a general cachexy pervades the frame. The mind too becomes gloomy, abstract, and desponding: self-destruction is not uncommon among the pellagrosi; and it has been said that a particular inclination is displayed by the subjects of this af-

fection to throwing themselves into the water.

Pellagra is a disease not of town, but of the country. It appears to be rather endemic than contagious; and it is evidently hereditary, at least the disposition to it. Whether it is a new disease, or only recently more particularly recognised, does not seem to have been satisfactorily ascertained. It is evidently, however, on the increase during the last fifty years. The immediately exciting cause seems to be poverty of diet, and the general wretchedness of the subjects whom the disease attacks. Why it should be confined to a particular district appears to be among the many arcana, in reference to endemic peculiarities: its origin, Dr. Holland thinks, may have been accidental, "and afterwards the malady may have been extended, and continued under the influence of the same general causes which produce other, though analogous, maladies elsewhere." Insolation can only be regarded as one of the excitants of the pellagra, since the distemper does not appear in other districts of the same latitude and temperature. On the treatment, nothing very satisfactory is known, and the only mode of preventing it is that of a change in the habits of life, upon which it seems to depend. "In 1786 the Patriotic Society of Milan proposed a premium for the best treatise on the history, prevention, and treatment of the pellagra; but without obtaining any results of the least practical value. It is not a light task to remove causes which affect a whole community; and rarely can such an object be accomplished by any sudden or artificial means, even though governments engage themselves in pursuing it."

Dr. Holland concludes his paper by noticing the existence of a disease in the Asturias, which bears a still closer resem-

blance to the elephantiasis than the pellagra.

The second article in this series is on a subject which at this moment excites very considerable attention, viz. the Treatment of Syphilis, without the use of Mercury. It is communicated by Thomas Rose, Esq. A. M., and commences with some introductory remarks on the difficulties that attend the discrimination between genuine and spurious syphilis: the writer then proceeds to say, that since much that is erroneous in reference to syphilitic and pseudo syphilitic affections has confessedly obtained, it is at least a possible case that the necessity of mercury, even in the genuine disease, has been presumed without sufficient reason. In the first place, he says, other specifics have been occasionally tried, and with reputed success, by respectable practitioners. Secondly; in several parts of Europe mercury is either not used at all, or administered in such a manner as we should consider totally inadequate to the cure of the disease; as is the case in Portugal. "It appears, that the use of mercury in that complaint is there almost entirely abandoned, and the consequences have not been such as, according to our ideas, might naturally have been expected.* Thirdly; The surgeons of some foreign regiments in our service have laid aside the use of mercury, as an antisyphilitic remedy, without any ill consequences; and, lastly, we are told by the present writer, that he himself has tried the same system in the Coldstream regiment, during the last year and three quarters, and that he has certainly succeeded in curing all the ulcers on the parts of generation which he has met with in that period, with the constitutional symptoms to which they gave rise, without the exhibition of mercury. "I may not be warranted," he adds, "in asserting that many of these were venereal, but undoubtedly a considerable number of them had all the appearances of the primary sores produced by the venereal virus, and arose under circumstances where there had been at least a possibility of that virus having been applied." We are told further by Mr. Rose, that upwards of sixty cases of

^{*} The question before us is one purely of fact, and it is our duty to record the different representations that are made by different individuals of respectability, in reference to the point under debate. The reader, however, will perceive that the above relation of Portuguese immunity from secondary symptoms of syphilis does not accord with the account by Dr. Robertson, in the present Number of our Journal.—Rev.

ulcers on the penis were cured at the York Hospital, Chelsea, by simple dressings, under the care of Mr. Dease. none of them was any local stimulant or escharotic employed, and the only general remedy was an occasional purgative." Out of the whole of those discharged, only one returned with an excoriation on the site of the old chancre, which got well in a very short time. Other facts, Mr. R-remarks, might be adduced against the principle of mercury being the only specific for lues venerea; but his principal object in the present paper being a statement of his own practice, he proceeds to the detail of cases, premising, that in the adduced instances "all ideas of specific remedies were laid aside. The patients were usually confined to their beds, and such local applications were employed as the appearance of the sores seemed to indicate. Aperient medicines, antimony, bark, vitriolic acid, and occasionally sarsaparilla, were administered, if from any circumstances they were judged necessary."

Mr. Rose's cases, which our limits preclude us from recording, are arranged under two general divisions. First, "sores which were not followed by any constitutional affection;" Secondly, "sores which were followed by constitutional affections." This last head is subdivided into, first, papular eruptions as one of the modes in which the constitutional symptoms were displayed; and, secondly, constitutional symptoms differing from papular eruptions: both of which, however, yielded to the common medicaments above stated

without the employment of mercury.

In the course of the remarks which form the conclusion of this paper, Mr. R -- admits that much of obscurity still hangs over the doctrine of syphilitic poison, and its antidotes. How far the variety which we meet with in the symptoms of venereal cases is to be attributed to different poisons; or how far the symptoms of the same poison may be modified and altered by constitution, climate, and habits of life, is as yet merely hypothesis. The cachexia syphiloidea, or pseudo syphilis, appears, like the true lues venerea, to be produced by some absorbed poison, and "there seems no doubt that in some of its stages it is contagious." We are not only in the dark with regard to the actual nature of the poison or poisons which are capable of engendering syphilitic diseases, but the mode in which the infecting matter is communicated, is in several cases very obscure; "infants are frequently affected shortly after birth, with coppery spots, emaciation, and other symptoms, supposed to be the effects of the virus of syphilis. We commonly find, in such cases, that one of the parents or

the nurse have had some venereal or syphiloid disease, at no very distant period; but the precise mode of infection can seldom be ascertained."

The following are the remarks with which Mr. R---'s paper concludes, and which we present to our readers without

"On the subject of all these diseases, much further information is wanting, and this can only be obtained by an accurate attention to facts, which their frequent occurrence gives every one an opportunity of observing; and by founding our opinions on a careful induction from these, and not on the vague theories which have hitherto so generally been adopted. If new forms of disease have arisen, or if syphilis be itself modified, both which doctrines some are inclined to maintain; these form only stronger arguments for clearing our minds of all preconceived ideas which are not found to bear the test of experience, and carefully investigating the symptoms and treatment of those diseases which now occur. I should be more inclined to suspect, from the extreme contradictions at all times to be discovered in our histories of syphilis, that the descriptions of it have been totally erroneous, even to the very circumstances and period of its origin, than that any such

change has taken place."

Another paper on the same subject is found in this volume, by G. J. Guthrie, Esq. which, like Mr. Rose's communication, commences by stating that the venereal disease has (either) within these few years totally altered in many of those properties and effects which are called specific; or that the greater part of the opinions which have been commonly entertained (respecting it) are erroneous." On the question, Whether the matter producing gonorrhea, and that occasioning chancre, are the same? our present writer is inclined to decide in the negative. Ancient and modern records, Mr. Guthrie remarks, agree in the position that many varieties of ulcersbreak out on the genitals, and that there is one of these of an absolutely specific character, the only specific antidote to which is mercury, does not by any means appear to be established to demonstration. Mr. Guthrie, as well as Mr. Rose, refers to the trials on this head which were instituted at the York Hospital, Chelsea, and states, that "of near one hundred cases of genital affections, which have there been treated in this manner, all the ulcers healed without the use of mercury; and among them there were of course many of every description, from the common ulcer without excabation or induration, to the solitary ulcer possessing the true characteristics of chancre." These experiments, connected with the reports of "near 400 cases more, which have been treated with the same result as far as regards the cure of primary ulcer," establish, Mr. G—— remarks, the possibility of curing

every kind of ulcer on the genitals without mercury.

"But the great question," he very properly adds, "is Were these people, whose ulcers were healed under this treatment, more liable to secondary symptoms than if they had been treated by mercury? According to the opinions commonly entertained, there ought not to be a doubt on the subject; but these opinions have been formed rather on what it was supposed must follow, than on what has been actually observed to follow. From the nature of the service, it has not been possible for us to trace with sufficient exactness the whole of the persons that have been treated in the York Hospital, although many remained for several months under observation; but of the whole treated, only six cases have been noticed in which symptoms, strongly resembling those of syphilis, made their appearance, although it is possible slighter ones, not requiring medical assistance, may have occurred. Of these six cases, two had ulcerated throats, combined with eruptions. In one, the papular eruption appeared before two ulcers, one, a raised ulcer of the prepuce, the other, a chancre on the corona glandis, had healed; one had a syphilitic leprous eruption, and being a private patient, was cured by mercury and the decoct. sarsaparillæ. Another of the same description was cured without either of these remedies. - Five of the six, then, were cured by simple means, such as cathartics, antimonials, sarsaparilla, and the warm bath, and one by the assistance of mercury."

We cannot follow this essay through the whole of its detail, but must content ourselves with extracting the recapitulatory

statements which the author makes in conclusion:-

"1. Every kind of ulcer of the genitals, of whatever form or appearance, is curable without mercury. This I consider to be established as a fact, from the observation of more than 500 cases which I am acquainted with, exclusive of those treated in the different regiments of guards, and which occurred in consequence of promiscuous intercourse.

"2. Secondary symptoms, (and I exclude trifling pains, eruptions, or sore throats,) that have disappeared in a few days, have seldom followed the cure of these ulcers without mercury; and they have, upon the whole, more frequently followed the raised ulcer of the prepuce than the true characteristic chancre of syphilis affecting the glans penis.

"3. The secondary symptoms in the cases alluded to, amounting to one-tenth of the whole, and which were treated on the antiphlogistic plan, have hitherto been nearly confined to the first order of parts; that is, the bones have in two cases only been attacked, and they have equally been cured without mercury.

"4. As great a length of time has elapsed in many of these cases, without the occurrence of secondary symptoms, as is considered satisfactory where mercury has been used, viz.

from six to eighteen months.

"5. The primary sores were of every description, from the superficial ulcer of the prepuce and glaus to the raised ulcer of the prepuce, the excavated ulcer of the glans, and the irritable and sloughing ulcer of these parts. In the inflammatory stage attended by itching, scabbing, and ulceration, they were treated for the most part by antiphlogistic and mild remedies; in the latter stage, when the ulcers were indolent, whether raised or excavated, by gentle stimulants.

"6. The duration of these stages is very different, is often increased by caustic and irritating applications, and is much influenced by surgical discrimination in the local treatment.

"7. The last, or indolent stage, often continues for a great length of time, especially in the excavated chancre and raised ulcer of the prepuce; and it appears to me that in these particular cases a gentle course of mercury, so as slightly to affect the gums, will materially shorten the duration of it, although

in others it is occasionally of no service.

"8. Although the secondary symptoms do, for the most part, yield to simple remedies, such as venesection, sudorifics, the warm bath, sarsaparilla, &c. without much loss of time, that is, in the course of from one to four and six months; yet, as in the primary ulcers, a gentle course of mercury will frequently expedite, and in particular persons and states of constitutions is necessary to effect, a cure; and that a repetition of it will even, in some cases, be requisite to render it permanent."

Thus have we been able, in the present Number of this Journal, to present our readers at some length with three separate varieties, so to say, of opinion and practice, in reference to the nature and requirements of venereal affections; and we have much exceeded the bounds which, in the general way, it is proper to give to one topic; since the questions at issue are pregnant with most material consequences as well to the profession as to the community. Dr. Robertson, it will be seen, by turning to his paper, contends that the medical

world is in an error by endeavouring to establish the possibility of the true lues venerea being capable of radical and permanent cure without mercury, and that the neglect of this remedy, in the first instance, is likely to be followed, sooner or later, by secondary and severe affections. Mr. Alcock argues for the propriety of treating the primary and local consequences of the poison with escharotics, without the internal use of mercury: and the two gentlemen, whose papers we have just noticed, conceive that both primary and secondary affections of a venereal nature may be got under merely by the employment of such general remedies as would be used in cases of common external sore, or constitutional disturbance, without the notion of any specific poison requiring a specific antidote. On these most interesting points of controversy, we abstain for the present from making any remarks of our own, and shall merely now content ourselves with announcing our willingness to receive and publish communications of facts and opinions bearing upon these points, from whatever quarter they may come, and to whatever side they may lean.

In continuing the analysis of this interesting volume, the paper which falls before us in succession, is a short one by Mr. Astley Cooper, detailing three cases, in which the dilatation of the urethra in females was accomplished by the introduction of a piece of sponge, in the manner recommended by Mr. Thomas, so as to admit of the extraction of calculus by the introduction of forceps through the meatus. The following are the remarks with which this paper closes:

"In the adult it will only be necessary to introduce a piece of sponge for twenty-four hours, and a stone of large size may be extracted without any great irritation being excited by it; but in children the dilatation should be more gradual, as they suffer more from it, on account of their greater irritability. The retention of their urine whilst the sponge is in the ure-thra also occasions considerable irritation; and it will be proper to have a groove made in the side of the sponge, to allow of the gradual escape of the urine; or, as my friend Mr. C. Hutchinson suggested, a catheter might be placed in the centre of the sponge.

"A great advantage will result from this mode of operation, if it should be found that in the majority of cases the urine is retained after the extraction of the stone, as the great objection to the use of the gorget or knife in the operation in the female, is the loss of power of retention which follows it, leav-

ing the patient offensive to herself and friends, and the subject of continued excoriation. It is true, Mr. Hey has suggested the introduction of a sponge into the vagina, in the hope, that by the constant application of the surfaces of the wound to each other, they might be made to unite; and when cutting instruments are employed, such a trial will be proper.

"Another advantage will be derived from this plan, viz. that it may be employed as soon as a small stone is discovered in the bladder, when it can be extracted with great ease, and at a time that a more dangerous, important, and painful opera-

tion would be hardly proposed."

Some Cases of Disease of the Heart, with Inquiry into their Nature and Causes. By J. H. James, Esq. Surgeon to the Exeter Hospital.

CARDIAC affections are at length beginning to take their share with hepatic derangements, in the investigation of pathologists; and it may be, that the partiality to one particular organ, as lord of the ascendant, which is so apt unconsciously to seize hold of the mind, will, in no long time, come to transfer the seat of empire over diseases, from the abdomen to the chest. Certain it is, to speak without hyperbole or metaphor, that unless we employ much caution in regulating our views of diseased phenomena, we are exceedingly prone to slide into one exclusive system and set of doctrines, and to look too much to a single organ as the source of mischief; without taking into consideration all the complicated and connected functions of organic and intellectual being. The scope and tenor of the paper now before us, we think calculated in some measure to dilate these contracted views of cardiac pathologists: and although many of the writer's assumptions and principles may be in some measure gratuitous, and far from well established, we certainly think it important to investigate the condition of the circulatory organs and powers, when inquiring into the origin of organic disease: and such investigation will, we are persuaded, often go to establish the fact, that the disordered state of the organ itself, discovered by dissection, is often only one of the links in the more extended chain of diseased production; and that the rest of the evil is in parts that have only a relative connexion with this great source and medium of circulation. One of the reasons adduced by Mr. James for supposing morbid affections of the heart to be frequently consecutive rather than primary, is, that the left ventricle is more commonly enlarged than any of the other cavities, "which is precisely the one likely to be affected by changes in the minute vessels; while the left auricle, which belongs to the same side of the heart, is more exempt from alterations in structure than any other, which is the reverse of what we

might expect, if the morbid state were idiopathic."

The three first cases which Mr. James adduces, are for the especial purpose of proving, that mechanical obstructions in the great blood vessels are often actually productive of organic disorders in the heart itself. The first of these, as is a curious and instructive narrative, we shall extract, with the writer's remarks:—

"On the 31st of June 1812, I saw the subject of the following observation, for the first time. He was a lad, eighteen years of age; his name, John Day. He was admitted a patient of Saint Bartholomew's Hospital, on account of a strain in the arm, and at first complained of no other ailment. At the time I saw him he was in apparently a dying state; there was an extreme degree of restlessness, anxiety, and feebleness, and he was exceedingly emaciated. The pulse at the wrist frequent, but feeble; at the lower part of the abdomen, however, on merely placing the fingers on the surface, (which was not very distant from the vertebræ, on account of the emaciation) a strong, large pulsation could be felt: it certainly did not feel altogether like the heavy beat of an old aneurism; but yet it was so large and strong, when compared with the pulsations elsewhere, that it appeared very probable that it was one, and this I believe was the general opinion at the time.

"On the inside of the right knee there was a patch about twice the size of a crown piece, of a bright red colour; but the surface was not elevated; there was no secretion from it, and it occasioned no pain. The state of the limb was in other respects very peculiar; it felt much colder to the touch than the other, and there was no pulsation in the arteries. This condition of the limb was supposed to be connected with the

aneurism felt at the bottom of the abdomen.

"All I could learn of his previous history was, that his complaints had been of a very anomalous nature; but he was supposed to have had disease of his vascular system, not only from the pulsations in the abdomen, but from their general fullness and strength elsewhere in the arteries, as well as in the heart; the former being described as having a kind of incompressible firmness. The secretion of urine was much altered, being of the appearance of decoction of bark; and he had pain in his loins: besides this, he had considerable sickness

and vomiting, which were referred to the affection of his kidneys.

"The following day, July 1st, he died, and his body was

examined.

"The Thorax contained a very small quantity of fluid; the lungs appeared pretty healthy: on one part of the surface, however, there was a red blush, but no effusion of lymph or other trace of inflammation. The pericardium was rather thicker than usual, and in its cavity was contained a small

quantity of reddish fluid.

"The heart was larger than natural, the cavities being considerably augmented in size; but the parietes were thinner than usual, particularly on the right side, and somewhat perhaps on the left. The muscular fibres were flabby. The cavity of the left ventricle was the most capacious. The valves of the aorta were covered with excrescences to a degree that must latterly have considerably impeded the exit of the blood; and also, by preventing them from performing their office properly, have occasioned regurgitation. There were several holes in the valves in the midst of these excrescences, which probably proceeded from ulceration; and beneath the valves there was a small sac formed containing pus, which projected into the right ventricle. There were a few specks of disease in the thoracic aorta, but there was no thickening, and it appeared, if any thing, smaller than common. In the abdomen it certainly appeared to be so, and so were the branches proceeding from it: and there was nothing in the slightest degree resembling an aneurismal tumor.

"The state of the right lower extremity led us to examine the artery on this side; and just below Poupart's ligament we found a plug of coagulum, which led to an excrescence, growing from the inner coat of the vessel, precisely similar to those found on the aortic valves. It also blocked up the profunda, so that no passage could be allowed through either of these vessels. They were, however, completely open to within a very short distance from this excrescence, where one or two small vessels were given off. The trunks of these two arteries, (the femoral and profunda) although, in common with others elsewhere, they were considerably smaller than usual, yet could hardly be considered as much contracted in

particular.

"Abdomen. The stomach was of a dirty unhealthy hue, with a blush of dusky red about the cardia; the intestines appeared unheathy and rather turgid with blood; there was not, however, any appearance of disease distinctly marked. The

liver was not much altered from its natural appearance. The spleen was turgid.

"The kidneys were larger, and much diseased.

"The head was opened, and a little serous effusion was found."

In this instance it would appear then, that the cardiac derangement was both idiopathic and sympathetic; in other words, that the obstructed circulation operated upon the organ as a cause of disease; to which disease there seemed, however, to have existed a constitutional predisposition. Both in this and the following case, which was characterized by similar features, there was a strength and apparent fulness of the pulsations, which "could not (it is well remarked) have proceeded from the stream of blood, but must have been caused by the increased impulse communicated to the surrounding parts from the difficulty of transmission through the trunks, or augmented sécousse of the arteries, as Bichat terms it." have thought it proper to notice this particular, in as much as the kind of pulse alluded to is often regarded as an index of the strength of propelling or circulatory power, when, in point of fact, it is a mere indication of obstructed and laboured circulation, and is in no measure remediable by either depletory measures or sedative medicinals. It is frequently found, indeed, not many days before death, in cases both of "mechanical" and "functional" obstruction to the free and full exercise of the circulatory faculties.

The third case related by Mr. James, is one also of obvious obstruction in the circulation occasioning cardiac disease. Upon dissection, "the vena cava was found, through a considerable space, crammed full with a firm coagulum," which is conceived by the writer to have existed during life; "and from the lymph effused on the surface of the artery, as well as from the peculiar state of the vena cava, it is not improbable that there was diseased action of the vessels generally."

The fourth example is one in which "the carotids beat strongly and evidently, and the heart largely and forcibly," while the beats of the radial artery were scarcely perceptible. "Could this have been the case, says Mr. J., if there had been obstructions at the orifices of the heart? It was not owing to the reflux of venous blood in the jugular vein, for it was synchronous with the pulsations of the arteries elsewhere: it was likewise firm and arterial. Besides, there was a difference in the pulsation of several other arteries; those of the two wrists for example: and finally, if the obstruction

had been originally seated in the heart, how did it happen that the pulse was again restored (as proved to be the case) to a considerable degree of fulness?"?

Another particular which Mr. J. dwells upon, in order to illustrate his principles of the consecutive disorder of the circulatory organ, is the manner in which the aortic valves are found to be deranged in their structure. "These valves, (he says) when ossified to such an extent as to afford obstruction to the exit of blood from the ventricle, are commonly found raised, and not parallel to the sides of the vessel, as might have been expected a priori, considering the current of blood flowing through them from an enlarged heart. This peculiarity (he adds) is difficult to explain; but one mode of doing so, would be to offer, as a solution of this phenomenon, obstruction situated at the extremity of the arterial system, the influence of the reflux determining their position." Another forcible argument in favour of the secondary nature of cardiac disease, is founded on the fact, that the calibre of the aorta is very frequently seen enlarged in cases of valvular ossification. "Now the obstruction (says Mr. J.) thus situated at the orifice of the ventricle, should, if it were the primary disease, by diminishing the stream of blood, have caused rather a diminution in the vessel." The contrary being the case, it is hence interred, that the ossification, to which all would by some be attributed, is merely a result of disordered circulation and vascular dilatation.

The above, with other cases adduced by the writer of the article now under review, are recorded and commented on principally with a view to prove the frequency of cardiac dilatation, &c. from an over proportion of blood being thrown upon the heart, in consequence of primary derangement taking place in the distant and minute portions of the circulatory system: but the writer is desirous of proving further, that "the converse of this is true, namely, that diminution of calibre, and decrease of strength, occur where there is a less quantity of fluid, and less effort necessary to propel it:" and in order to establish this latter assumption, he relates two or three cases of diminution in the ventricular cavity, connected with states obviously preventive of the blood's reflux.

Upon the whole, we have been much gratified with a perusal of this paper: and although its author is, perhaps, rather disposed to stretch his positions out into too wide an embrace, and to overlook specific causes of organic disorganization, we think the paper contains hints and elements at least of a cor-

rect pathology, in reference to cardiac diseases; which, as well as hepatic, and other derangements of structure, are often mere sympathetic consequences of those very diseases they are conceived to originate. We ought not to pass over the mention, though we have not either time or space to do more than mention, some very apposite remarks which the paper contains on the discrimination necessary to be observed between serious effusions, as the result of different states of arterial action, and those which occur where there is merely obstruction to the return of venous blood to the heart."--" In this last case" (Mr. J. says he believes) "it sometimes happens that the secreting vessels pour forth a more than usual quantity of fluid: but it also happens, that the swelling which takes place, is owing merely to the accumulation of the natural secretions, which can no longer be poured into the vascular system again, for want of room."

The laws which regulate the transmission and extravasated deposit of serous and other fluids from the circulating mass, appear to us to be still involved in a good deal of what is doubtful in premise, and false in inference: and we think that physiology, and pathology may still be very profitably exercised in further investigations of these important points. Mr. Carlisle has well said in his recent lectures before the College of Surgeons, that since the discovery of the absorbents we have been too disposed supinely to attribute all obscure functions to their agency, to endow them with faculties and accuse them of faults, without due evidence of their being either

possessed of one, or chargeable with the other.

Further Observations on the Ligatures of Arteries; to which is added, a Case Popliteal Aneurism, attended with some unusual Circumstances. By William Lawrence, Esq. &c. &c.

MR. LAWRENCE continues the plan of cutting off both ends of the ligatures close to the knot, in the manner detailed in the sixth volume of the Transactions; and he states, that the new mode, by diminishing irritation, and simplifying the process of dressing, very materially promotes the comfort of the patient, and the convenience of the surgeon, while (he says) it has not produced ill consequences, or any unpleasant effects, in the cases which have come under his own observation. Both in Mr. L—'s own practice, and in that of several of his friends, the plan has succeeded even in aneurismal opera-

tions; and the paper before us contains the result of Mr. W. Cumin's experience on the new method, in a letter to Mr. L.,

which we present to our readers:

"In my letter enclosing one of these ligatures, I stated that I had seen the practice followed with good success at the General Hospital, La Corderia, (the rope work) near Bilbao, in the autumn of the year 1813. It was first suggested, as I understood, to Mr. Henning, now a deputy-inspector of hospitals, by an hospital mate, (Mr. Hume) who had seen it practised by a naval surgeon, stationed somewhere on the coast of British North America. The practice appeared peculiarly advantageous in the hospital near Bilbao, where the contagious gangrene was at that time making the most frightful havock, and where, of course, immediate union of divided parts was above all things to be most ardently desired. never saw, nor, until the publication of Mr. Guthrie's book, did I ever hear of any bad effects following the use of short cut ligatures. Neither sinuses nor unmanageable sores, as far as my observation has gone, could in any instance be traced to it. I should be much inclined to pursue this mode of tying arteries in every case of operation, particularly since it has been followed by such encouraging results in your hands. At the same time, I beg to say, that my experience of this plan has been very limited. Nor would any thing have induced me to address you on this subject, if I had not wished to satisfy the doubts expressed in your paper respecting the fate of the ligature. When the cure proceeds favourably, a small pustule or very minute abscess makes its appearance on the line of the cicatrix, which soon after bursts, discharging a small circle of thread, which had formed the stricture on the artery. No doubt there may be cases, where the morsel of thread shall remain close to the vessel, without creating any disturbance whatever; just as musket balls, and other extraneous bodies, have done for years in multitudes of instances. But the process I have described is the most usual where the cure goes on well, and beyond all question the most satisfactory to the surgeon."

To this paper is appended the following case of popliteal aneurism, conceived, as will be seen, to have been a sarcona-

tuous tumour:

"A middle aged man was received into Saint Bartholomew's Hospital, with a large tumor filling up the whole ham, and extending on both sides of the femur towards the front of the limb. It had begun behind; had existed for five months; had grown latterly with great rapidity, and manifestly increased during a few days, for which we had the opportunity of observing it in the hospital. It had a firm fleshy feel, being a little softer at one of its anterior protuberances than in other parts. It gave him great pain, though it was not tender on being handled; it had caused considerable ædema of the leg and foot, and had rendered the limb completely useless. The surgeons of the hospital, in consultation on this case, viewing it as a large and rapidly increasing fleshy tumor, determined that amputation of the limb was the only remedy that could be proposed. This I performed high up, having first plunged an abscess lancet into the softest part of the tumor to the whole depth of the blade, without giving issue to any fluid.

"I employed pressure in the groin, instead of the tourniquet; the use of that instrument being very unfavourable, where it is necessary to amputate in the middle of the thigh, and in a less degree in other amputations of this limb, by confining the muscles, and impeding their free retractions. This prevents us from sawing through the bone so high as we otherwise might do, and thus increases the chances of that very annoying occurrence, the protrusion and exfoliation of the

bone.

"The examination of the amputated limb disclosed to us the very unexpected circumstance, that this tumor was a popliteal aneurism, containing an immense mass of firm bloody coagulum; not of that light brown laminated kind, which lines old aneurismal sacs, nor of the loose and soft texture that belongs to recently clotted blood. Hence, although the sac had been freely penetrated by the abscess lancet, no part of its

contents escaped.

"The coats of the popliteal artery; and a continuation of them, such as aneurisms ordinarily exhibit, formed the back part of the sac; while the front and sides were made up of the thigh bone, the back of the knee-joint, and the neighbouring muscles. The fleshy and tendinous fibres of the vasti were exposed on clearing out the coagulum, which not only covered the back of the femur, but had also advanced on each side towards the front, so as nearly to have insulated the bone. The periosteum was removed at several points."

"The popliteal vein, stretched over the back of the tumor, was completely obliterated for some extent. The popliteal artery, similarly extended, was flattened for two or three inches, but quite pervious to the sac, as well as from it; both its openings into the bag presenting the usual appearances.

"When the patient was more closely questioned, after this examination of the limb, he stated, that the swelling had con-

tinued of a moderate size until five weeks previous to his admission into the hospital, when it suddenly enlarged, and that it had increased considerably from that time. The pulsation, which the tumor no doubt had possessed at an early period, had altogether escaped his notice.

"I conclude that the case had been originally a popliteal aneurism of the usual kind; that the sac had given way in front, so as to convert it from a circumscribed into a diffused aneurism, and thus to present to us the deceptive appearance of

an immense sarcomatous tumor.

"Since this case happened, I have heard of two or three

other somewhat similar instances.

"The very large quantity of coagulum, and the state of the thighbone, may create a doubt whether tying the femoral artery would have been a successful method of treating this case. However, had I suspected the nature of the affection, I should certainly have made the trial; and should have undertaken it with a confident expectation of success, grounded on experience of the efficacy and extent of those natural processes, by which such effusions are absorbed, and such cavities obliterated. I have stated the case, to put others on their guard; and shall be happy, if what I have said should in any instance prevent so serious a mutilation as that which my patient suffered."

A Case of Extra Uterine Fætus contained in the Fallopian Tube, with some Observations. By George Langstaff, Esq.

"A healthy woman, thirty years of age, (a patient of my friend Mr. Snow, surgeon, Highgate,) was suddenly attacked on the 14th of April, 1317, with excruciating pain in the lower part of the abdomen and right groin, succeeded by almost constant distressing vomiting, which continued sixteen hours, without the least mitigation, although a variety of remedies were employed. After the cessation of pain and vomiting, the patient became extremely restless and anxious; her pale countenance, and small quick pulse, denoted considerable internal mischief; and the most probable conjecture respecting the nature of the complaint was, that some large bloodvessel had been ruptured. The abdomen enlarged, and occasioned dyspnæa; the vital powers gradually yielded, and she expired forty-eight hours from the commencement of the attack."

Upon dissection, the uterus was found enlarged, and containing a decidua, but the os uteri was not closed; adhesions

were found between the fimbriated part of the fallopian tube and the posterior surface of the peritonial covering of the uterus and the ovarium; which is very frequently, Mr. L. says, seen in Cyprians, and which he conceives to constitute the principal source of barrenness.

History of a Woman who bore a seven Months' Fætus for seven Years, was delivered of it per Anum, and completely recovered. Communicated by Dr. Albers, of Bremen.

This was supposed to have been originally an extra uterine conception, and the fœtus to have been dislodged from the fallopian tube (in which it was probably contained) by a fall, and to which immediately succeeded symptoms denoting the cessation of fœtal life.

On the Formation of New Joints. By John Howship, Esq.

Mr. H. conceives, that in the formation of new joints, the ossific matter is deposited in the intestines of the cellular structure of the capsular ligament, and that this formation can seldom, if ever, take place where dislocation has been connected with rupture of the capsular ligament

Observations on the Nature of some of the proximate Principles of the Urine; with a few Remarks upon the Means of preventing those Diseases, connected with a morbid

State of that Fluid. By W. PROUT, M. D.

Dr. P. is well known as an able chemist and physiologist. In the communication now before us he professedly confines his attention to the three principles in urine, the urea, the saccharine matter, and the uric or lithic, and "the other principles, and particularly the phosphates and oxalic acid are omitted, from the uncertainty which still hangs over their nature." After describing the method of obtaining urea, and giving the analysis of this substance, together with that of the sugar of urine, and lithic acid, he concludes this division of his paper by the following inferences:—

"1. The atomic theory or theory of definite proportions, holds good in all these instances; a circumstance which renders it probable, that this will afterwards be found to be the case in all substances capable of chrystallizing or forming chrystalline compounds, both in the vegetable and animal

kingdoms.

"2. The above compounds appear to be formed by the union of more simple compounds, as urea of carburetted hydrogen and nitrous oxide, lithic acid of cyanogen and water, &c. circumstances which render it almost certain that their artificial formation falls within the limits of common chemis-

try.

"3. The remarkable relation found to subsist between urea and sugar, seems to explain in a very satisfactory manner the phenomena of diabetes, which may in fact be considered to consist in a depraved secretion of urea. Thus the weight of the atom of sugar is just half that of urea; the absolute quantity of hydrogen in a given weight of both, is equal; while the absolute quantities of carbon and oxygen in a given

weight of sugar, are precisely twice those in urea.

"4. Lithic acid is a substance quite distinct from urea inits composition; a fact which explains an observation I have often made, that an excess of urea generally accompanies the phosphoric diathesis, and not the lithic. I have several times seen urea so abundant in the urine of a person where the phosphoric diathesis prevailed, as to crystallize spontaneously without being concentrated by evaporation, on the addition of nitric acid."

The second section of the paper contains a few remarks on the remedies, preventive and corrective, of calcularly formation. Dr. P. regrets that chemistry does not apply so satisfactorily to practice as could be wished, and is disposed to infer, that purgatives are the principal agents upon which much reliance can at present be placed in counteracting the tendency to lithic concretions.

On the Virtues of James's Powder in the Apoplectic Diathesis. By J. CHEYNE, M. D.

[Dublin Hospital Reports.]

Dr. Cheyne has been led to make several clinical experiments on the effects of the above-mentioned remedy in the apoplectic diathesis of aged persons, and his reports are favourable to its efficacy. He has also found James's Powder of remarkable utility in certain instances of determination of blood to the head, occurring in the early periods of life, and threatening to end in effusion. Lastly, in two cases of general plethora, in which, however, the head was more af-

fected than any other part, this medicine was exhibited by Dr. Cheyne with perfect success. The following is an Outline of one of these Cases.

A lady, about 28 years of age, of sanguine temperament and full habit, had been affected, for nearly seven years, with a distressing fulness in her head. During the first three years she bare three still-born children. She then went to London, and consulted an eminent accoucheur, who ordered her to live low, abstain from fermented liquors, and be bled whenever her head was severely affected. "In the two following years she had two children born healthy and strong." The next two years, though on the same plan of treatment, were not so well passed and, she again had a still-born child.

She could now hardly keep her eyes open, in consequence of the heat and weight in her head. She had continued vertigo; indistinct vision; impaired memory, with stupor and confusion; had a sense of suffocation and fulness about her throat, so that she feared to go to sleep, lest she should never awake. But what distressed her more than all, was a peculiar sensation at her heart, "as if there was no pulse in it for nearly a minute—as if it had not room to beat." Her skin was dry and hot; pulse full, and rather quick, with swelling, but not cedema of the hands and feet.

She began a course of James's Powder, by taking two grains the first night, and half a grain additional every succeeding night, till the dose amounted to twenty grains, which she continued to take for five weeks, when she found herself so well that she discontinued the medicine. Meantime she got clear of all her unpleasant symptoms. The medicine did not produce any perceptible effect. In removing the dry and burning heat of the skin it did not sensibly produce

perspiration.

Dr. Cheyne generally directs the patient to begin with two grains at bed time, increasing the dose by half a grain every night until some sensible effect be produced on the stomach, bowels, or skin. When gastric irritability supervenes, the dose is to be lessened the succeeding night. By combining a few grains of rhubarb with this medicine it may be borne in a larger dose than when exhibited alone. If the skin be softened, or the bowels affected, the dose should not be further increased, but it must be repeated every night for a considerable length of time. In one or two instances it had a soporific effect. It has not been productive of any injurious effects upon the appetite or digestion; and no rules of

diet, except the avoiding of acids, have been given beyond what the case otherwise required. It did not appear that the habit was more disposed to catarrhal or rheumatic complaints while under the influence of James's Powder, than at any other time.

This medicine is not recommended to supersede the usual remedies—bleeding, purging, and a strict antiphlogistic regimen, but merely to form a part of the prophylactic treatment

when the threatened fit of apoplexy is over.

It would not be difficult to explain the good effects of antimonials in relieving local congestions or determinations, on the principle of their deriving to the periphery of the body, promoting intestinal secretions, and controlling increased vascular actions: but this we need not dwell on at present.

Dr. C. has not used any other preparations of antimony than James's Powder, as they are not so uniform in their effects, though he thinks they might be substituted in economic prescriptions. The same remedy is equally applicable to epilepsy connected with the apoplectic diathesis, and perhaps

to other species of epilepsy also.

This paper, like all the others of Dr. Cheyne in the same volume, is characterized by accurate observation and clear judgment: and we may here state our opinion, that the DUB-LIN HOSPITAL REPORTS, as a whole, may competite with any volume of a similar description in the English language. We wish the work every success.

Some Remarks upon the Efficacy of general Remedies, and especially Purgatives, in insuring a healthy State of the Urinary Secretion, and thus in preventing Calculous Affections. By WILLIAM PROUT, M. D.

[From the London Medico-Chirurgical Journal and Review.]

Dr. Prout's attention to the subject under consideration was excited, several years ago, from noticing the effect of purgatives on the urinary secretion in his own person; namely, that of restoring it from an unnatural and turbid state to its proper colour and transparency. The natural conclusion which he drew was, that "the cause, whatever it might be, which rendered laxatives necessary, contributed chiefly to produce this unhealthy state of the urine." Aware of Vol. VII.

the affinity between urinary deposite and urinary concretions, our author naturally queries whether, if purgatives have the power of removing urinary sediments in common cases, they may not also have the power of removing them in extreme

cases, or in gravelly or calculous affections?

"Vitiated secretions (says Dr. Prout,) of every description, must be the result of general or of local causes, or of both united. But when we reflect how little liable the secreting organs are to be affected, and how seldom, in point of fact, they are affected, except through the medium of the general health, we are naturally led to look here for the primary cause of their derangement. The inference is obvious. medies, no matter of what description, that have a tendency to restore the general health, must have a tendency to insure the due performance of all the bodily functions, and secretion among the rest. I need not enlarge here upon principles which are well understood, and the elucidation and application of which are justly ranked among the greatest discoveries of modern medicine; but shallamerely observe, that by paying proper attention to the general health, and especially to the functions of the stomach and bowels, I have, in numerous instances, witnessed the speedy removal of urinary deposits, and the complete restoration of this secretion to its natural appearance and properties. This has been remarkably the case in children, in whom the phosphoric diathesis most generally prevails. The remedy employed has been for the most part a combination of rhubarb and calomel, in connexion with which others were occasionally exhibited as cir-In adults, as is well cumstances rendered it necessary. known, both the phosphoric and lithic diatheses prevail, and often alternate in the same person. I have, however, generally seen both equally yield to the same principles of treatment, and sometimes even to the same remedy; and am disposed to think, that they are more intimately connected than commonly imagined. Some differences, however, must be admitted to exist between causes which can produce such different effects, though I must confess myself unable, after a good deal of attention to the subject, to point out, or even to offer an opinion of their nature. As to particular remedies, they will readily occur to the practitioner who keeps the above-mentioned principles in view. I may, however, observe, that when laxatives have been particularly indicated, I have been accustomed to exhibit a combination of pil. hyd. with aloes, or the ex. col. com. with the best effect. Remedies determining to the skin and kidnies are often useful adjuncts, and a

regimen in strict unison with the same general principle should

be adopted." P. 546.

The above observations are confined, of course, to diseases of the urine, while as yet they are merely constitutional, and have not produced local disease or actual calculus. To the treatment of this last class of human ailments Dr. Prout has

nothing to add.

Dr. P. judiciously observes, that the good effects of acid and alkaline remedies cannot be satisfactorily explained on chemical principles. The propensity to generate lithic or phosphoric acid is so capricious, and so frequently alternates in the same person, and under apparently similar circumstances, that, reasoning chemically upon the subject, the exhibition of acid or alkaline remedies is as likely to do harm as good. And, after all, the object of the chemical practitioner is, at best, but of a secondary importance. It is to prevent the effects of disease, rather than to remove it. Chemical remedies are therefore only palliatives; and it is highly probable, as Dr. Prout observes, that their good effects depend more on their general than their chemical operation.

Dr. Prout is evidently a man of comprehensive ideas and clear judgment. The paper is equally creditable to his pro-

fessional skill and his personal modesty.

Surgical Observations, Part IV. By CHARLES BELL.

This Part contains Report of Cases of the Acute Fungus Tumour, or soft Cancer; Report of Cases of Tumours which take their rise from the Gums and Alveoli; Report of Gunshot Wounds of the Knee Joints; Report on Sacs formed in the Urinary Organs; Report on Fracture of the Skull, &c. all illustrated by Cases with five plates.

1. Soft Cancer. This is the most terrible tumour to which the human body is subject; for, long before danger is indicated, the patient is beyond the power of remedy. When amputation is deemed advisable, the prognosis is often uncer-

tain; but the diagnosis is nevertheless very desirable.

"It is very important to know the early character of the tumour; and I think the authors who have treated of this disease, have dwelt chiefly on its appearance in the latter stage. In the beginning, and whilst the tumour is deep, I know not how its nature can be determined; but when it becomes prominent, it is peculiarly tense and elastic. In its progress it is not uniform; but having projected in a small hemisphere, another of corresponding form and dimensions rises beside the

first: in succession another lobe or division is produced; and so it proceeds until the tumour has assumed a very formidable magnitude. The last formed knob always is more full and elastic, with a fresher colour and more vascularity. Those formed earlier become somewhat shrivelled, and present to the finger more the feeling of a solid, the surface being firmer and irregular. There is no pain for a long time, unless the place of the tumour subject it to the action of the muscles, or press it against the nerves, or impede the motion of a joint. In some of these cases, however, the pain of the tumour in the latter period was so great, that the suffering of amputation was considered as the lesser evil. As the tumour enlarges, the cutaneous veins become more conspicuous, and on the convexity of the more elastic projections the smaller vessels are numerous. The colour of such projecting parts of the tumour is peculiar. There is a faint yellowish red, deep-

ened by the ramifications of these cutaneous vessels.

"On the prominence of some of the older tubercles the cuticle breaks; a pale fluid exudes from small holes. From the same source there in time springs up a spongy and luxuriant fungus. This fungus frequently bleeds; and it is this character which induced Mr. Hey to give the disease the name of fungus hæmatodes. By this time the disease is propagated to other parts of the system; to some of the viscera of the abdomen, and most commonly to the liver; and there are felt internal pains, which, although they may be relieved by bleeding, and blisters, are fatal signs. For now we observe a rapid and singular termination of the disease in death. The constitutional powers are suddenly affected; the patient is seized with rigors, attended with sickness; the countenance suddenly changes; it becomes pale, and of dingy hue or earthy colour. Sometimes the skin assumes a very peculiar bright yellowish tinge. In the mean time there is a remarkable irritability of stomach, so that nothing will stay on it; the pulse becomes very feeble and rapid; the patient has internal pains; he becomes more and more feeble, insensible, and dies. From the occurrence of these constitutional symptoms, the patient dies in the space of from three to eight days." P. 371.

Case. Robert Clark, ætat. 68, brought to the hospital, June 1, 1815, for a large tumour seated in the groin, which he thinks originated in a strain. It is now the size of a melon; embraces the crural artery and vein; colour dark purple; surface irregular; resistance unequal. Complains of tension and numbness in the thigh.—June 6th. The disease pronounced fungus hæmatodes. The colour is darker,

with tingling pain.—17th. The tumour is increasing, with cedema of the leg. Died on the 8th of July. On dissection, the tumour was found to consist of a greyish mass, streaked with blood. All the lumbar glands partook of the disease. The coats of the crural artery were soft, and participated in the disease.

We shall pass over several interesting cases, in order to delineate one which has been furnished by that accurate observer, and enlightened physician, Dr. Dickson, of Clifton.

Robert Lane, of a scrophulous habit, and drunken character, had his left leg jammed in the main hatchway but continued at his duty for ten or fourteen days. Then came on pain, increased by exercise, which continued for a month to augment. The integuments about the head of the fibula inflamed; the swelling was tense and shining. The accident happened on the 5th of May, and on the 25th of July, he was received into the naval hospital. In the end of September, the tumour measured 23 inches in circumference, occupying the upper part of the leg; unequally elastic, with many conspicuous veins on the surface.—Sept. 28. It was punctured, when a stream of pure venous blood flowed out, requiring compress and bandage to restrain it. After this, a tenacious sizy fluid oozed out in great quantity. On the 2d of October, the tumour presented a livid appearance, with a substance protruding from the puncture-wound. A probe could now be passed in all directions through the wound. On the 5th, the swelling extended above the knee, and inflamed lymphatics could be traced along the thigh. The tumour and fungous protrusion now rapidly increased, attended with night sweats, small, quick pulse, and flushed face .-- Amputation. The tumour presented a mass like brain in consistence and colour. Fibula carious nearly throughout; tibia diseased; arteries were entire, but ossified. Various ossific depositions throughout the tumour. The patient did well till the 5th day, when, on the first dressing, the integuments were found partially adherent, with pus covering the wound. On the 6th, a hæmorrhage. 7th. Profuse discharge of thin matter, and now a tumour appeared in the middle of the stump; another hæmorrhage. 8th. Hæmorrhage profuse; pulse quick, small, hurried; countenance altered. Finally, on the 11th, tetanus appeared, and on the same day he died.

On examining the stump, the periosteum had separated from the bone, and the tumour was seen to arise from the medulla of the bone. It cut like the cortical part of the brain.

The 8th case is singular, and we shall give it entire.

"About three years before I saw the subject of the following Case, he had fallen from the side of a ship. It happened in this way: Seeing his fellow workman falling, he threw himself forward to break his fall, and succeeded; but in doing this, he fell himself; for he was caught by the ham, on a projecting bolt in the side of the ship, over which he turned and hung suspended. He suffered much from the bruise on the back of the thigh, but in a short time got entirely well.

"Some time after this, he began to be much troubled with a pain in his foot. This pain was in a part not likely to procure him much sympathy; and he suffered much and long, without attempting to procure assistance, or only such as the

extremity of pain would induce a man to try.

"But the pain continued to increase from day to day, until it totally unfitted him for labour, exhausting and wasting his frame by continued watching. This pain was of a peculiar kind; it was confined to the bottom of the foot, and was like an intense burning, while there was not the slightest discolouration or swelling in the place. Often he would rise at night from his bed, and stand on the cold stones, or plunge his foot into warm water or cold water, or alternately.

"He now sought relief in a public hospital, and the attendants, disconcerted with the strangeness of the symptoms, which they did not comprehend, put him, as is usual on such occasions, on a coarse of mercury; but this trial of a medicine did no good, and he went home. But still suffering continually, he was induced, after a lapse of some months, to return to the hospital, and was again put under a more severe and a longer continued course of mercury than before. By the time this was over, he had suffered continually for two years, and was reduced to a skeleton, and was far gone in hectic.

"When I saw him, he gave me this account, and then continued to complain of the extreme pain in the sole of the foot. He told me too, that he had a strange numbness of the leg when he sat down. On examining into this circumstance, which I thought would lead to some explanation of the more prominent symptom, I found a tumour in the ham, which, when pressed, gave no particular pain, but rather a sense of pricking numbness down the leg. The tumour was to the feeling of a bony hardness. I conjectured that there was some tumour pressing and wedging upon the popliteal nerve; and that this injury to the nerve in its course was referable,

by the patient's feelings, to the extremity and final distribution of the nerve. I thought of an operation, yet I was deterred from it by the dying state of the poor man, who now suffered but indirectly from the disease of the leg, and in all probability death was no longer to be avoided by the removal of the original cause. I thought that he might be brought round, so as to gain some strength; but within the week he died."

Dissection. "The examination of the cavities was not permitted. On dissecting the limb, I found a tumour under the fascia, and about three inches higher than the usual place of popliteal aneurism. I found some nerves running over it of a remarkably pure whiteness. On tracing the sacro-ischiatic nerve, I found it enter into the substance of the tumour; but on more careful observation, I found that the peroneal or fibular nerve, though close on the tumour, was not incorporated with it; but that the tibial nerve was incorporated with the tumour. On making the section of the tumour, it had much the appearance of a large ganglion on the tibial nerve: the fasciculi of the nerve could be traced only a little way into its substance; and in the interstices of the fasciculated bands, a vascular fatty substance could be observed, which resembled marrow. By more experience, I now recognized in this matter the distinguishing character of the cancerous tumour we are now considering.

"I think it is impossible to mistake the nature of the symptoms. I have no doubt that the injury received on the ham was the cause of the disease in the nerve, as in other cases we have seen a blow produce the disease in the bone: yet I think we cannot close our eyes to the striking proof of the affection of a nerve in its course being referable to its extremity. Had the nature of this disease been understood earlier, I have little doubt that cutting across the portion of the popliteal nerve, which forms the tibial nerve, and the extirpation of the tumour, would have been succeeded by perfect relief from pain, at the expence of losing the use of the

leg." P. 405.

The Report is wound up by some pertinent observations on the structure of soft cancer, for which we must refer to the work itself.

REPORT II. Tumours arising from the Gums and Alveoli.

Small tumours in these situations often remain stationary for a long time, but at length force their way into the bones of the face, filling up the cells and the cavities of the nose, press-

ing out the eyes, and rising at last upon the basis of the brain itself. Thus it occupies the whole face, extinguishing in succession the organs of the senses; impedes utterance, and finally destroys the patient by pressure on the brain. Mr. B. suspects that the teeth, the alveoli, and the gums, have something in common, or, as it were, the same constitution. This suggests to us, that when the disease originates in the gum, it may belong to the tooth and alveolar process also. On this process of reasoning, Mr. B. has been induced to cut away gum, alveolar process, and tooth, along with the tumour that

springs from the gums.

"This tumour first shews itself in a small hard prominence of the gum, shooting out betwixt two of the teeth; and the teeth being good, is an unfavourable circumstance, for when they have become loose, and are displaced, without being themselves diseased, it implies that the cause is deep, and not to be removed by pulling the teeth. If the teeth be carious, and originally faulty, we have a reasonable expectation of arresting the progress of the disease, by removing the teeth; but when, independent of the teeth, the tumour has its origin in the membrane of the fang, or in the socket, we cannot hope to extirpate the disease, without removing the whole system of parts, the whole of what is connected in constitution." P. 416.

The first Case led to a bold operation, which does great credit to Mr. Bell's courage and skill; it was, however, unsuccessful. The second Case was more fortunate, and it we shall condense.

September 6th. — Burrows. One side of the upper jaw is occupied by a tumour which has displaced the teeth, and projects into the mouth. The tumour is firm, and has little sensibility, bearing the impression of the lower jaw teeth. -Mr. B. first removed the teeth, then divided the gum and alveolar process across with a saw, to the depth of three quarters of an inch anterior to the tumour. He next cut across the alveolar circle behind the tumour. An incision was then made with the scalpel, which cut the tumour from the cheek; another was made in the angle betwixt the projecting tumour and the roof of the mouth. A small saw was now introduced betwixt the tumour and the cheek, and the jaw bone cut across above the range of the fangs of the teeth. The whole was then torn away with large forceps. A stream of blood jetted from the jaw, supposed to come from the enlarged alveolar artery. A piece of cork, fitted to occupy the chasm, was introduced on some lint dipped in tinct. ferri mur.

patient was then made to close her teeth upon the cork, and the hæmorrhage was suppressed. This woman recovered, and, twelve months after the operation, continued well. But this period, Mr. B. justly observes, is no security against a return of this formidable disease.

REPORT III. On Gun-shot Wounds of the Knee-Joint.

Our author makes a few general reflections on this subject, and then minutely details a very interesting case, of which we shall presently give an outline. He observes, that very few histories of gun-shot wounds are given in detail. This is rather a sweeping expression, and we think we could point out such a number as would overthrow the position; but we are not, at present, in the humour for cavilling about expres-

When a musket-ball is lost in the fleshy substance of the body, modern surgery forbids our making much search for it, by "poking with the probe," or many free incisions. But it is questionable if this rule holds good in regard to the wounds of joints and the heads of bones engaged in the articulations. In a joint, where the texture is peculiar, and the parts constantly in motion, the presence of a ball causes great inflammation, protracted suffering, and lameness. If possible, therefore, the ball should be discovered and extracted previously to the commencement of re-action in the parts. Here every thing depends on the judgment of the surgeon, since the degree of injury, which the constitution will safely bear, must be calculated. An absolute rule is therefore just as likely to lead to error, as to direct the practice aright.

Case of Baron Dreissen a Russian General. This officer was wounded in the memorable battle of Borodino, in September 1812. A musket ball was supposed to strike him in the most prominent part of the inner condyle of the left femur. It was treated as trifling on the field of battle; but when carried to Moscow, the patient's sufferings were extreme. The wound closed, and the knee swelled prodigiously. Cataplasms re-opened the wound, and brought on a discharge. He was now carried to the town of Murom, where Muchin, a famous Russian operator, examined him; but as eight days had now elapsed, the track of the ball could not be ascertained. In January 1813, at Moscow, Muchin thought he could feel the ball, and attempted an extraction; but the ball was immoveable, and the surgeon desisted, and used injections of myrrh and bark, with compression, to close various Vol. VII. 47

sinuses that had formed. Nothing at last remained but the canal of the original wound and the ball at the bottom of it. In July, the General was so much better as to be able to travel to Petersburgh, where Mr. Bush, Professor of the academy, made many attempts to extract the ball, but all in vain. He advised him to trust to nature and time. In the mean time, another surgeon made trial of the spunge tent, which brought on violent tensive inflammation, by which the sponge was jammed in the wound, and obliged to be dragged away by force. In February 1814, the General managed to join the head quarters of the Emperor at Troyes. Here our countryman, Sir James Wylie, hesitated between amputation and the trepan, but in the critical state of affairs, delivered

the patient over to the Engligh surgeons.

On the Baron's arrival in London, Mr. Bell found his health much broken down by the long continued irritation of the wound. His pulse was quick; he had frequent febrile paroxysms, ushered in by rigors. The wound was so irritable that the gentlest introduction of the probe brought on an attack of fever. He was removed into the country, and Mr. B. very honourably desired a consultation. When the Baron had so far recovered as to be able to bear an examination, it was found that the probe introduced into the wound passed three inches and a half before the rub of the ball could be felt. The probe passed a little obliquely downwards and backwards through the substance of the head of the femur. The ball appeared to be lodged in the bone. An attempt was made, by the advice of Sir E. Home, to enlarge the wound, by the use of the lapis infernalis; the consequence was a severe attack of erysipelas, which extended from the groin to the toe. After recovering from this, Mr. B. made various attempts to extract the ball; but owing to its great depth in solid bone, the sensibility of the parts, and the constitutional irritability, he was forced to desist. After this, it was determined to let the wound close, and the Baron returned to the continent. It continued closed all the year 1815, and till March 1816, when it opened, preceded by great swelling and inflammation of sixteen days' continuance. An abscess was at the same time formed on the outside of the knee, which was opened by M. Gesling, Surgeon of the Imperial Guard, and vent given to a great deal of water. The Baron having in some degree recovered, Surgeon Krestowsky attempted to dissolve the ball by pouring quicksilver into the wound. In September 1816, the Baron returned to London, when he shewed Mr. B. a quantity of quicksilver, which had, at different times, issued from the sinus on the outside of the kneejoint. Mr. B. thinks the presence of the quicksilver occasioned more distress, swelling, and discharge than would other-

wise have taken place.

In the month of December the Baron began to suffer in an extraordinary manner. Violent paroxysms of pain came on suddenly, and continued for one or two nights, after which they subsided: these returned again and again with increased violence. The excess of pain was such as, at one time, to deprive him of his senses for a quarter of an hour. It appeared that the fibular nerve was involved in the inflammation, as a burning sensation shot to his foot, along the whole course of the nerve. The sinus was now enlarged, and matter mixed with quicksilver discharged, which, for a time, relieved him. In a consultation, however, it was recommended to desist for a time from all operative measures. The rapid returns of pain, with fever and nervous retchings, determined Mr. Bell

to amputate.

Dissection. Mr. B. enlarged the sinus on the outside of the knee, so as to admit the finger betwixt the popliteal vessels and the lower head of the femur; but no indication of the presence of the ball was to be felt. In prosecuting the dissection, a great quantity of mercury was found lodged in different abscesses around the joint. There was an abscess between the heads of the gastrocnemius muscle, and a sinus ran high up along the side of the popliteal vessels. There was a diseased portion resembling fungus, which surrounded the fibular nerve, and in which was contained innumerable small globules of mercury. The trunk of the popliteal nerve was surrounded with a diseased portion of the same kind, in which were also globules of quicksilver. On calculating the level of the ball, the femur was cut so as to disclose it. It lay in the centre of the outer condyle, surrounded by a layer of soft membrane resembling red velvet. It was, notwithstanding, firmly impacted, and although one half of it was exposed, it stuck firmly. There was a small cavity in the bone behind the ball, which communicated with the joint and with the sinuses. The patella, tibia, and fibula, were osseously united. The periosteum covering the head of the femur was inflamed, and the surrounding parts thickened and diseased. The popliteal vessels and nerve were, through their whole extent, involved in condensed cellular membrane, making a firm mass.

An interval of ease succeeded the amputation; but bye and bye the strokes of pain were renewed, and referred to

the same part of the dorsum of the foot as formerly, and attended with the exact same contractions of the toes, (in imagination) and all other morbid sensations. The thigh swelled several times, and depots of matter formed in various parts, requiring artificial vents. At length, however, this unfortunate officer recovered so far as to be able to embark for his

own country on the 3d of May 1817.

The next Report, on the formation of sacs in the urinary bladder, we must pass over unnoticed, because Mr. Bell's observations have, in general, reference to preparations in Windmill Street; and, of course, are of less utility to those beyond the circle of the metropolis. But the Report on fractures and counter-fissures, &c. of the skull is too important to be slightly analysed.

Mr. B. commences this Report with some judicious advice to the young surgeon, on his being called to an accident. If a dislocation or fracture, before we seize on the limb, or tear off the dressings, we should sit down calmly and examine into the circumstances attendant on the injury, by which in-

vestigation much knowledge may be gained.

Mr. Bell here takes occasion to question the accuracy of some of Mr. Abernethy's opinions respecting the effusion of blood on the dura mater from rupture of the middle artery of that covering. Mr. B. thinks that the power of the artery is inadequate to the effect of separating the dura mater from the skull; but that, on the contrary, this membrane is loosened by the blow, and the sanguineous effusion is the effect, not the cause of the separation. There is certainly much plausibility in Mr. B's reasoning; yet, when we consider that the whole force of the arterial system immediately acts on the ruptured point of an artery; and when we reflect on the tensive injections of limbs resulting from punctured blood-vessels, we shall probably pause ere we hastily reject the opinion of Mr. Abernethy.—Mr. B. illustrates his position thus:

"Strike the skull of the subject with a heavy mallet: on dissecting, you find the dura mater to be shaken from the skull at the part struck. Repeat the experiment on another subject, and inject the head minutely with size injection, and you will find a clot of the injection lying betwixt the skull and the dura mater, at the part struck, and having an exact resemblance to the coagulum found after violent blows on the head. This proves also that the advice is wrong which would hurry the young surgeon to trepan the skull immediately, to preserve the life of the patient, and to prevent the hæmorrhage from being profuse: for this idea is given on the suppo-

sition that the artery is slowly separating the membrane from the bone by the force of arterial pulsation." P. 467.

Case. April 16th. A man was brought to the hospital insensible from a blow on the head from the fall of a bucket from a great height. Pulse 56; breathing slow; pupils contracted, previously dilated. Considerable tumefaction of the scalp behind the ear, and above the transverse line of the occipital bone. Draws a deep sigh at short intervals, with snorting respiration in the intervals. Pulse irregular. Scalp opened, but no fissure or depression observable. Six ounces of blood drawn from the occipital artery, and thirty from the arm. The pulse increased in quickness after the last beeding. He died on the second day.

Dissection. Coagulated blood lay under the skull, and extended over all the basis cranii. No fissure in the skull-cap, but a rent was discovered in the base of the skull. It began by the side of the petrous bone of one side, and extended round the occipital bone behind the foramen magnum to the petrous portion of the temporal bone on the opposite side. The blow had been received on the strongest part

of the skull, the fissure was in the weakest.

Case. A young man fell from the parapet of a wall, and pitched with his head on the area, a height of five feet. Brought into the hospital stunned; but recovered as from a slight concussion, and by the usual means apparently got well. He had been dismissed, and gone into the boardroom to return thanks, but suddenly fell down and died.

Dissection. The margin of the foramen magnum was fractured, and it appeared, that on suddenly turning round the head, the condyle was displaced, and the loose bone brought to press and nip the medulla oblongata: in short, the poor

fellow was pithed.

Case. A man fell from a height and injured the right parietal bone, near the coronal suture. He recovered from the effects of concussion; but after an interval he was attacked with rigors, became quite insensible, and lay with stertorous breathing and a total relaxation of one side. The bone was exposed and examined: it was found bare, the pericranium having separated from its surface. The trephine was applied, but no matter found. The patient died next day.

Dissection. The left posterior lobe of the cerebrum was

found inflamed, and covered with purulent matter.

Our limits compel us to close our analysis. Mr. B. has here concluded the first volume of his Reports, and hints that

we are not to expect regularity in the appearance of the succeeding parts. We are sorry for this: for although order and composition were not strictly attended to, and we could not say—

Materiam superabat opus;

Yet the value of the matter made ample amends for the defect of the manner. We trust, therefore, that he does not begin to flag; and that we shall not have occasion to apply the vulgar adage of the "new broom," to the Clinical Reporter of Middlesex Hospital.

Surgical Essays. By ASTLEY COOPER, F.R.S. and BEN-JAMIN TRAVERS, F.R.S. Part I. with numerous Plates. pp. 300. London, 1818.

[From the London Medico-Chirurgical Journal and Review.]

THE founders and supporters of public hospitals, those truly benevolent and Christian institutions, had little idea of the extent of the benefits which thence flow to society at large. Numerous as are the sufferers which there find an asylum during the pangs of disease, and experience the kindness, the humanity, and the skill of the medical officers, they form but a drop in the ocean, compared with those scattered over the earth, and who indirectly participate in the practical knowledge acquired in those inimitable schools of instruction and medical science, through the medium of the medical and surgical pupils there educated. But a great desideratum yet remained. The pupils of these institutions are incapacitated, from their ages and various other circumstances, for the important office of recording, analysing, and arranging the mass of materials which every day present themselves to their view. This requires the hand as well as the head of a Master; and truly happy are we to see the good work commencing and radiating from various centres, and thus diffusing the beams of science through every avenue and ramification of the profession. This indeed was a duty more incumbent on the superior medical officers of public hospitals to perform, than the daily routine of visits. They are the depositaries of practical knowledge, ex officio; but they only hold it in trust for the benefit of their less fortunate brethren, who anxiously look up to them for all great improvements in the science. It is true, they are not compelled to disseminate or communicate the knowledge they have thus acquired, and it is painful to reflect that few of them, comparatively speak-

ing, have been generous enough to do so voluntarily; but, as the brave are always the most gentle, so the truly learned and experienced in the profession are always the most liberal; and the volume before us is an incontestible proof of this position. What can an Astley Cooper gain by the drudgery of publication? Does his reputation require any additional wings ?-We may answer, that he can only gain the gratitude of the profession, and the blessings of the sick man, who knows not to whom he is indebted for the preservation of his life, but whose blessing shall be laid up-" where moth doth not corrupt, nor thieves break through and steal."

"Homines ad deos nulla re propius accedunt, quam salutem hominibus dando." CICERO.

But to our subject. This is a work in every way worthy of a Cooper and a Travers. They have wisely determined to confine their reports to the useful in preference to the

wonderful; to-

"-a narration that includes more of the common than the rare; for it is neither in the contemplation nor desire of the Editors to promulgate marvellous cases. The singularity of a case may be a good reason for its publication, but its importance is a better; and, in general, the greater its singularity, the less its importance." Preface, p. xii.

How often has this important truth flashed on our minds!

How seldom has it proved the guide of either individuals or societies!-The work consists of six papers, three by each of the Editors. The first is on Dislocations, by Mr. Cooper; the second, on Iritis, by Mr. Travers; the third is the highly interesting Case of Ligature of the Aorta, by Mr. Cooper; the fourth, on Phymosis and Paraphymosis, by Mr. Travers; the fifth, on Exostosis, by Mr. Cooper; the last, on Wounds and Ligatures of Veins, by Mr. Travers. Of each of these, excepting one, we shall endeavour to give some account. The excepted paper is on Iritis, by Mr. Travers, which is so singularly interesting and important, that we mean to make it the subject of a short separate analysis on a future occasion. It is a fine specimen of accurate observation and legitimate analytical induction, tending to stamp an intrinsic value on every thing that flows from the same source.

1. Dislocations. Mr. Cooper, in his usual plain but energetic manner, forcibly points out the importance of articular anatomy, and the disgrace, not to say ruin, which may result from ignorance on this subject. He justly observes, that stu-

dents will

"—often dissect the muscles of a limb with great neatness and minuteness, and then throw it away without any examination of the ligaments, the knowledge of which, in a surgical point of view, is of infinitely greater importance; and from hence arise the numerous errors of which they are guilty when they embark in the practice of their profession." P. 2.

To give any thing like a connected view of a paper in which there is scarcely a superfluous syllable, would be impossible in the limits of an analysis; and therefore we must confine ourselves to a few extracts. This is of the less consequence, as the work only wants annunciation to excite the general demand for its entire perusal. The following passage is long, but it is too important to be condensed, and will offer a fair example of the valuable information which the reader is to

expect from the pen of Mr. Cooper.

"Means of Reduction. - The means employed for the reduction of dislocations are either constitutional or mechanical; it is generally wrong to employ force only, as it becomes necessary to use it in such a degree as to occasion violence and injury, and it will, in the sequel, be shewn, that the most powerful mechanical means fail, when unaided by constitutional. The power of the muscles, in the first instance, is to be duly appreciated, which forms the principal cause of resistance. The means to be employed for this purpose, are, to produce a tendency to syncope, and sometimes fainting itself, by the abstraction of a quantity of blood, and by placing the patient in a warm bath to occasion a similar feeling. If the blood be removed quickly, by a large orifice, it is known that fainting is more readily produced, and a hot bath from 100° to 110° will often not produce syncope, unless blood has been previously drawn.

"But of late years I have practised another mode of lowering the action of the muscles, by exhibiting nauseating doses of tartarized antimony. This, given in repeated doses, produces sickness, but not vomiting; emetics have been recommended, and there is no doubt but the state of nausea which they produced is useful, but the vomiting is, in itself, of no use, for as soon as the nauseating effect is produced, the muscles lose their tone, and dislocations can be reduced with comparatively less effort, and at a more distant time from the accident, than can be effected in any other way.—Two cases are related in the following pages: one from Mr. Norwood, Surgeon, Hertford, the other from Mr. Thomas, apothecary to St. Luke's Hospital; in which, by the combination of bleeding, warm bath, and nauseating doses of tartarized anti-

mony, dislocations were reduced at a period from the accident, greater than I have ever known in any other example. One of these cases occurred at Guy's, and the other at St. Thomas's Hospital, at the time these gentlemen were officiating as dressers (See Cases of Dislocation on the Ilium.)

"The effect of opium I have never tried, but it would probably be useful from its power of diminishing the nervous

influence.

"The reduction of the bone is to be attempted after lessening the powers of the muscles, by making an extension of the limb, by fixing one bone and drawing the other towards its socket. One great cause of failure, in the attempt to reduce dislocations, arises from insufficient attention to not fixing that bone in which the socket is placed. As, for example, in attempting to reduce a dislocation of the shoulder, if the scapula be not fixed, or one person pulls at the scapula and two at the arm, the scapula is necessarily drawn with the os humeri, and the extension is very imperfectly made; the one bone, therefore, must be as firmly fixed as the other is extended.

"The force may be applied either by the exertion of assistants, or by a compound pulley, but the object is to extend the muscles by gradual, regular, and continued force; the pulley, in cases of difficulty, should always be resorted to; its force may be directed by the surgeon's mind; but when assistants are employed, their exertions are sudden, violent, and often ill directed, and the force is more likely to produce laceration of parts, than to restore the bone to its situation. Their efforts are also often uncombined, and their muscles necessarily fatigue, as those of the patient whose resistance they are employed to overcome.

"In dislocation of the hip-joint, pullies should always be employed, and in those dislocations of the shoulder which have remained long unreduced, they should always be resorted to. I do not mean to doubt of the possibility of reducing dislocation of the hip by the aid of men, but to point out the inferiority of this mode to pullies. Most writers on surgery have hinted at the use of pullies, but they have not duly appreciated them: my good master, Mr. Cline, whose professional judgment no man can deny, always strongly re-

commended them.

"During the attempt to reduce luxations, the surgeon should always endeavour to obtain a relaxation of the stronger muscles. The limb should therefore be kept in a position between flexion and extension, as far as it can be. Who has not seen, in the attempt to reduce a compound fracture, in the

extended position of a limb, the bone incapable of being brought in apposition under the most violent efforts, quickly replaced by an intelligent surgeon, who immediately directed the limb to be bent, and the muscles to be placed in a com-

parative state of relaxation.

"A difference of opinion prevails, of whether it is best to apply the extension on the dislocated bone, or on the limb below. M. Boyer, who has long taken the lead in surgery in Paris, prefers the latter mode. As far as I have had an opportunity of observing, it is generally best to apply the extension to the bone which is dislocated. There are exceptions to this, however, in the dislocation of the shoulder, which I generally reduce by placing the heel in the axilla, and by drawing the arm at the wrist in a line with the side of the body, as when the arm is placed close to the side, the pectoral muscle and the latissimus dorsi are brought into a state of relaxation, and they form a powerful opposition when the arm is carried far from the side.

"Great advantage is derived in the reduction of dislocations, from attending to the patient's mind; the muscles opposing the efforts of the surgeon, by acting in obedience to the will, may have that action suspended, by directing the mind to other muscles. Several years ago, a surgeon, in Blackfriars Road, asked me to see a patient of his with a dislocated shoulder, which had resisted the various attempts he had made reduction. I found the patient in bed, with his right arm dislocated; I sat down on the bed by his side, placed my heel in the axilla, and drew the arm at the wrist; the discolated bone remained unmoved. I said, rise from your bed, Sir; he made an effort so to do, whilst I continued my extension, and the bone snapped into its socket: for the same reason, a slight effort, when the muscles are unprepared, will succeed in reduction of dislocation, after violent measures have failed." P. 25.

Mr. Cooper next lays down admirable, though concise instructions, for the diagnosis and reduction of the individual dislocations. In these instructions the accurate anatomist and expert surgeon are every where conspicuous, as well they may be. Cases, in elucidation, are clearly but succinctly narrated. We shall quote one as a specimen.

"I was desired to visit a man, aged 28 years, who, by the overturn of a coach, had dislocated his left hip more than five weeks before, and who had been declared not to have a dislocation, although the case was extremely well marked. His leg was full two inches shorter than the other; his knee and

foot turned inwards, and the inner side of the foot rested opposite to the malleolus internus of the other leg. The thigh was slightly bent towards the abdomen, and the knee was advanced over the other thigh. The head of the thigh-bone could be distinctly felt upon the dorsum of the ilium; and when the two hips were compared, the natural roundness of the dislocated side had disappeared. I used only mechanical means in my attempts at reduction, and although I employed the pullies, and varied the direction of repeated extensions, I could not succeed in replacing the bone, and this person returned to the country with the dislocation unreduced." P. 35.

In the section on the fractures of the os innominatum, which are liable to be mistaken for dislocations, Mr. C. displays his usual accuracy of observation, and perspicacity of ideas. In half a dozen lines he conveys a clearer notion of things, than others would do in a whole page. But we must refer to the work itself; for, happily, this is a volume which cannot be analysed, on account of the intrinsic value and concentration of every part. The plates, though lightly executed, express with ease, and accuracy the subject which they are designed to represent. Those, in particular, showing the modes of applying the apparatus for the reduction of hip-joint dislocations, are peculiarly satisfactory. The subject of dislocations is to be continued in the Second Part.

2. The second Paper in the Volume is on Iritis, by Mr. Travers, which we shall reserve for a short separate Analysis in a future Number of this Journal. We therefore pass on to

Mr. Cooper's

Case of Ligature in the Aorta. Mr. C. fears that the title of this paper may impress the reader with an idea that nothing could justify him in performing the operation. He is quite right. We have heard this observation several times made, and we have invariably repelled the charge. We are not among the cold and calculating surgeons, who would risk incurring a particle of popular clamour, to save the life of a fellow-creature, by attempting what was not sanctioned by written or oral authority. In this unsuccessful enterprize, Mr. Cooper has gained more real and permanent glory, than in all the operations he ever performed. But we are far from thinking the attempt unsuccessful, in the end, though, it was so in the beginning. The derangement of parts, and the constitutional irritation that resulted thence, were such as precluded almost the hope of success. But the object is gained, the knowledge of the possibility of effecting the arrest

of blood through the aorta, and that without any material injury to the parts through which the operation was carried, or shock to the vascular system, by the sudden arrest of so immense a current of blood. Every day impresses us more and more with the admiration of the wonderful-the almost omnipotent powers of Nature, in compensating for the losses or accidents to which our frames are subjected. Has not the experiment of Dr. Parry proved, that when a carotid artery was tied, new shoots sprouted out from the cardiac portion of the artery traversed round the ligature, and dipped into the excommunicated portion, thus carrying on, through many small channels, the current that previously ran through one? What are we to expect after this? In respect to the abdominal aorta, when we survey the inosculations of the mammary and epigastric, the superior and inferior mesenteries, the lumbar arteries, &c. we cannot, for a moment, hesitate to believe that the mere obstruction of circulation in the descending aorta would be got over by the powers of Nature; and that it is principally the violence of the operation itself that we have to dread. This indeed is almost proved by a case of natural obstruction in the aorta brought forward by Mr. Cooper, and which was observed in the Hotel-Dieu in 1789. The thoracic arteries were found so enlarged, that they could be felt running down the sides of the chest tortuous and dilated. The aorta, immediately beyond its arch, was contracted to the size of a writing quill; and the case altogether clearly demonstrated, that the greater part of the blood usually conveyed by means of the aorta through the thorax, is capable of finding a circuitous course by the branches of the subclavian and intercostal arteries. It is also well known that Mr. Cooper has, several times, passed ligatures round the aorte of dogs, and found the blood was readily transmitted by anastomosing vessels to the posterior extremities of the animal. We now come to this interesting and melancholy case.

C. H. 38 years of age, had fallen against the corner of a chest thirteen months previously, and received a violent blow in the left groin. On the following day the thigh was much swelled and discoloured; but after a confinement of three weeks, the limb returned to its natural size, and he resumed his employment, and worked, though with pain and difficulty, till within a fornight of his entering the hospital, 9th of April 1817; when there appeared a swelling in the groin, partly above and partly below Poupart's ligament, with an obscure pulsation, and concluded to be aneurismal. The swelling was

now diffused, with several large veins crossing its surface, and accompanied with much pain on pressure. In three days the swelling increased to double its former size, and the pulsation became less distinct. The tumour was so situated that it was impossible to tie the artery above the sac without cutting into the abdomen. Various temporary measures were put in force, but at length ulceration began, and on the 20th of May, hemorrhage made its appearance. On the 25th, at nine o'clock at night, the case was desperate, and death was ready to snatch its victim. Anxious to avoid opening the abdomen, in order to secure the aorta near its bifurcation, Mr. C. determined, if possible, to pass a ligature around the artery from within the aneurismal sac. With this view, he made a small incision upon the tumour, about two inches above Poupart's ligament, and through a small opening in the sac, passed down his finger to feel for the aperture of the artery, but found only a chaos of broken coagula, and that the artery was destroyed within the parietes of the aneurism. This attempt therefore failed. As Mr. Cooper was quitting the patient's bedside, a sentiment of generous pity and manly resolution overcame all other considerations, and he nobly determined to tie the aorta, and thus afford the only ray of hope, and the only chance of saving his patient from instant dissolution.

Here is one of those traits of magnanimity which ennoble human nature, and which shed a conviction over the soul of man, that he is yet destined for "another and a better world." This "pleasing awful thought" is only alloyed by the bitter reflection, that there are men who, insensible to the feelings of humanity and the loud and eloquent appeal of Nature, could cooly condemn as rash, and almost impious, this truly Christian effort to turn aside the dart which had already sped from the hand of death towards the unfortunate victim! "Homo solus aut Deus aut Dæmon!"

Operation. "The patient's shoulders were slightly elevated by pillows, in order to relax, as much as possible, the abdominal muscles; for I expected that a protrusion of the intestines would produce embarrassment in the operation, and was greatly gratified to find that this was prevented by their empty state, in consequence of the involuntary evacuation of fæces; and here let me remark, that I should, in a similar operation, consider it absolutely necessary, previously to-empty the bowels by active aperient medicines.

"I then made an incision, three inches long, into the linea alba, giving it a slight curve to avoid the umbilicus; one inch

and a half was above, and the remainder below the navel; and the inclination of the incision was to the left of the umbilicus in this form [?]. Having divided the linea alba, I made a small aperture into the peritoneum, and introduced my finger into the abdomen; and then, with a probe-pointed bistoury, enlarged the opening into the peritoneum to nearly the same extent as that of the external wound. Neither the omentum nor the intestines protruded; and during the progress of the operation, only one small convolution projected beyond the wound.

"Having made a sufficient opening to admit my finger into the abdomen, I then passed it between the intestines to the spine, and felt the aorta greatly enlarged, and beating with excessive force. By means of my finger nail I scratched through the peritoneum on the left side of the aorta, and then gently moving my finger from side to side, gradually passed it between the aorta and spine, and again penetrated the peritoneum on the right side of the aorta. I had now my finger under the artery, and by its side I conveyed the blunt aneurismal needle, armed with a single ligature behind it; and my apprentice, Mr. Hey, drew the ligature from the eye of the needle to the external wound; after which the needle was immediately withdrawn.

"The next circumstance, which required considerable care, was the exclusion of the intestine from the ligature, the ends of which were brought together at the wound, and the finger was carried down between them, so as to remove every portion of the intestine from between the threads: the ligature was then tied, and the ends left hanging from the wound. The omentum was drawn behind the opening as far as the ligature would admit, so as to facilitate adhesion; and the edges of the wound were brought together by means of a quill-

ed suture and adhesive plaster.

"During the time of the operation, the fæces passed off involuntarily, and the patient's pulse, both immediately, and for an hour after the operation, was 144 in the minute. He was ordered thirty drops of tincture of opium and camphorated mixture, and the involuntary discharge of fæces soon after ceased. I applied my hand to his right thigh immediately after the operation, and he said that I touched his foot; so that the sensibility of that leg was very imperfect.

"For the following particulars I am indebted to Mr. Cox,

one of my apprentices.

"At midnight his pulse was 132.

26th. "At one o'clock in the morning, the patient complained of heat in the abdomen, but he felt no pain upon pressure; he said that his head felt hot, and that he had pain in the shoulders; his lower extremities, which were cold soon after the operation, were now regaining their heat; his body was in other parts covered with a cold sweat. The sensibility of the lower extremities has been very indistinct since the operation.

"At two o'clock, he felt so comfortable from his medicine that he wished to have more of it, and ten drops of tincture of opium were given him; his legs were wrapped in flannel, bottles of hot water were applied to the feet, and he then said

that the heat of his belly was lessened.

"At six o'clock the sensibility of his limbs was still imperfect.

"At eight o'clock. A. M. he expressed himself as feeling quite comfortable; he however passed no urine, and had no evacuations; his right limb was warmer than the left, and the sensibility was returning.

"At noon the temperature of the right limb was 94, that

of the left or aneurismal limb 87½.

"At one o'clock, P. M. Mr. Cooper visited him; and as he walked up the ward, he appeared much gratified at seeing his patient, who was at the point of death the evening before, and who was now adjusting his bed-clothes, and smiled as

Mr. C. approached the bed.

"At three o'clock, after a fit of coughing, the man was much alarmed with the idea of the thread having slipped into the wound: it was a false alarm; but, to prevent the idea of its recurrence, it was fastened to a quill: soon after this he he complained of pain in the abdomen; it was not very severe, nor did it last long; readily yielding to fomentations. As he had no evacuation, he was ordered an enema.

"At six o'clock, PM. he vomited soon after the glyster had been administered; the heat of the right leg was 96,

that of the left or diseased limb 87%

'At nine in the evening he took half a glass of port wine in warm water, which he immediately rejected; he complained of pain in the loins; his pulse was 104, and feeble; he was very restless; and had an involuntary discharge of fæces.

"Eleven at night, his pulse was 100 and weak; he still

vomited.

27th. At 7, A. M. the report was that he had passed a restless night; the vomiting had returned at intervals; his pulse was 104, weak, and fluttering; he complained of pain

all over his body, more particularly in his head; and the carotids beat with considerable force; he had great anxiety expressed in the countenance, was very restless, and the urine dribbled from him with some degree of pain at the end of the penis.

"At eight o'clock, A. M. the aneurismal limb appeared livid, and felt cold, more particularly around the aneurism; but the

right leg remained warm.

"At eleven o'clock his pulse was 120, and weak; he appeared to be sinking. To the questions which were put to him he did not return any answer; he appeared to have an uneasiness about the heart, as he kept his hand upon the left breast. He died at eighteen minutes after one, P. M. having survived the operation forty hours.

"After being informed of his death, I requested Mr. Brookes, of Blenheim Street, to attend with me at the inspection of the body. Mr. Travers, surgeon of St. Thomas's Hospital, Mr. Stocker apothecary of Guy's, and a large con-

course of medical students attended the examination.

"When the abdomen was opened, we found not the least appearance of peritoneal inflammation excepting at the edges of the wound. The omentum and intestines were free from any unnatural colour; the edges of the wound were glued together by adhesive inflammation, excepting at the part at which the ligature projected. We were much gratified to find that the ligature had not included any part of the omentum or intestine: the thread had been passed around the aorta, about three quarters of an inch above its bifurcation, and about an inch, or rather more, below the part where the duodenum crossed the artery. Upon carefully cutting open the aorta, a clot of more than an inch in extent was found to have sealed the vessel above the ligature; below the bifurcation, another, an inch in extent, occupied the right iliac artery, and the left was sealed by a third, which extended as far as the aneurism; all were gratified to observe the artery so completely shut in forty hours. The aneurismal sac, which was of a most enormous size, reached from the common iliac artery to below Poupart's ligament, and extended to the outer side of the thigh. The artery was deficient from the upper to the lower part of the sac, which was occupied by immense quantity of coagulum.

"The neck of the thigh bone had been broken within the

capsular ligament, and had not been united." p. 124.

It is evident here that the patient did not die from visceral inflammation, nor the shock of the operation, but solely from

the want of circulation in the aneurismal limb, owing to the too advanced stage of the disease.

Our limits prevent us at present from noticing the other papers in this invaluble volume, which few will fail to peruse.

Remarks on Arsenic, considered as a Poison and a Medicine; to which are added, five Cases of Recovery from the poisonous Effects of Arsenic, together with the Tests so successfully employed for the Detection of the white Metallic Oxide; in which those satisfactory Methods peculiar to Mr. Hume were principally adopted, confirmed, and compared with others formerly in Use. By John Marshall, Member of the Royal College of Surgeons, and Apothecary to His Royal Highness the Duke of Gloucester's Household. pp. 163. London, 1817.

[From the Medico-Chirurgical Journal and Review.]

In a recent trial for murder by poison, we could not avoid blushing for our profession, in observing the contradictory and inconclusive evidence of the two medical gentlemen who attended the woman in her last moments. One, a veteran village practitioner; and the other, a young buck of the first fashion; who, we doubt not, would have made a most brilliant display of his knowledge of juridical medicine, had he been in the drawing room instead of a court of justice. It is, indeed, most astonishing, after the many examples which have occurred within these few years, that the study of juridical or forensic medicine has not become more general in this country, as nothing, surely, can be more overwhelming than the exposure of profound ignorance in the man, who, as an instance now adduced, has been held up by his neighbours as possessing skill, talent, and ability. Yet we have, year after year, to lament the slow progress of this important branch of science, so necessary for the just and equable distribution of the laws by which we are protected. The administration of poison is so readily accomplished, and the crime is of such a demoniac nature, frequently extending far beyond the contemplation of the wretch himself; that it is most devoutly to be wished, that none should escape who may be guilty of a crime of such magnitude, at the same time, that the criminal should only be convicted on the clearest and most decisive evidence; and notwithstanding the surpassing "beauty, rapidity, and accuracy" of Mr. Hume's experiments for the detection of arsenie, we would caution our readers against a total reliance on 49

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them; and most strongly recommend its re-production in the

metallic state, whenever it can be accomplished.

We hail every thing which may tend to the elucidation of this interesting subject with the highest satisfaction; and, as the communication of well authenticated cases is perhaps the very best mode of conveying medical intelligence, Mr. Marshall deserves our praise for his humane exertions, however we may differ from him in his general conclusions.

The volume now before us, is a republication of his former work on the Effects of Arsenic, and contains some additions which may be useful. In the prefatory introduction, we have a high eulogium on the experiments of Mr. Hume; and the general philanthropy of the author's disposition may be ob-

served in the following sentiments:

"The pleasure of preserving human life, every professional gentlemen derives in the course of practice; the agreeable and enviable sensation of satisfaction arising from such successful instances, is, if possible, more especially augmented, in all those cases wherein the functions of the vital powers, in the plenitude of health, are so suddenly assailed and liable to be extinguished, as by the rapid and destructive operation of poison."

The five cases described in Art. 1, are already well known; but as the knowledge of the symptoms arising from arsenic cannot be too widely diffused, our readers will excuse the

following copious extracts.

March 21, 1815. "On entering the house I first saw Eliza Fenning,* the cook, lying on the stairs apparently in great agony, and complaining of a burning pain in the stomach, with violent retching, headach, and thirst. I directed her to drink some milk and water, and to be immediately conveyed to her bed; at the same time observing, that I would see her again as soon as possible, after having visited the rest of the family. My attention was then directed to Mr. Robert Turner, who appeared to be nearly in articulo mortis; his face, which had been swollen, having assumed the appearance the true facies hippocratica, my apprehensions were considerable for his preservation. On examining the contents of the utensils in which he had vomited, a fluid was perceived of a vellowish and greenish colour, and in two of them stercoraceous matter. The pulse was gone; his voice faint and tremulous; and he pointed to the abdomen in great agony.

^{*} The unfortunate girl who afterwards suffered for the attempt to murder this family.

examination, I discovered a very remarkable irregularity of surface, occasioned by the spasmodic contractions of the muscles of the abdomen, and even of the viscera; this uneavenness extended from the epigastric region to the pubis, and to the right and left hypochondrium; and the excruciating pain was relieved for a short time by rubbing the abdomen with a piece of hot flannel and laudanum. From this state of the abdominal surface, there could be no doubt of the arsenic having gone far beyond the limits of the stomach into the alimentary canal. He complained of extreme faintness, and dreadful sickness. He had been violently purged; and on examination of the alvine secretions, the singularity of their appearance excited great surprise; they were all of a bright homogenous green colour, like paint, and strongly resembled the green colour produced from a solution of the arsenic by one of Mr. Hume's tests, the amoniaco-sulphate of copper, which will afterwards be more fully described. Each effort of vomiting and purging was preceded and followed by these painful gripings and spasmodic contractions of the abdominal muscles. He complained of great heat in the stomach, which the patient compared to a furnace, or red hot irons; which sensation commenced at the tongue, and was felt throughout the course of the esophagus to the cardia, or upper orifice of the stomach; insatiable thirst; violent headach; the eyes impatient of light; but the pupils sensible, and the extremities cold. The patient attempted in this dreadful state to get out of bed to walk to the night table; he was directly seized with vertigo, dimness of sight, and paipitation of the heart: he fell down and went off into an epileptic fit; he was assisted on the bed, and in a few minutes recovered from the fit.

"Mrs. Robert Turner had great pain, and burning heat of the stomach; headach; immoderate thirst; vomiting and purging with olive green alvine discharges; tension of the abdomen; the face swollen; cold chills alternating with flushings of heat; and light was painful to the eyes. Her peculiar situation made me apprehensive of a miscarriage, in consequence of frequent bearing pains, more or less constant, in the loins; and, independently of these distressing symptoms, her mind was additionally agitated by the alarming state of her husband, who was lying by her side. If she had miscarried under these dreadful circumstances, there can be no hesitation in saying, she must have inevitably lost her life." p. 11—14.

Mr. Turner, senior, had symptoms similar to those already stated, but somewhat more moderate. The patients had been

visited by Mr. Ogilvy, of Southampton Buildings, Chancery Lane, who had most judiciously cleansed the stomach, and administered some castor oil, with plenty of sugar and water, occasionally mixed with milk.

"Mr Gadsden, (Mr. Turner's apprentice) complained of a burning heat of the stomach; much nausea with vomiting; and severe gripings with purging: extreme faintness; palpitation of the heart; headach; and trembling of the right arm, and right

lower extremities." p. 15-16.

It was resolved, that the purgative plan should be persisted in, and a full dose of castor oil was given, followed by a solution of the sulphas magnesiæ and manna, in mint water; and a saline effervescent draught was to be alternated every two hours with the salts, letting the alkali predominate, with the intention of neutralising any remains of the arsenic, and relieving the disposition to vomit; and this system was to be continued until the alvine secretions became of a natural colour. patients were allowed to drink frequently, and in small quantities, milk; soda water, with or without milk; and mutton broth. But these worthy citizens, who, perhaps, had never before been deprived of their favourite beverage, porter, felt extreme reluctance to comply with this simple regimen; and, in direct violation of the directions of Messrs. Marshall and Ogilvy, Mr. R. Turner could no longer restrain himself than the 25th, when he indulged freely in the use of porter and animal food, and, as might have been expected, he suffered severely for his imprudence, by the symptoms being greatly aggravated.

On the succeeding morning, Mrs. R. Turner's pulse was 130, and accompanied by faintness; but the bearing pain with the pain in the loins, had somewhat abated. They had all

passed a most restless night.

"Mr. Gadsden appeared to be the most affected; he had been seized with four epileptic fits in the course of the night, preceded by a violent palpitation of the heart, accompanied with a peculiar tremulous action of the right arm and lower extremity; a considerable degree of symptomatic fever; insatiable thirst; a white but moist tongue; the face flushed; the respiration burried; pulse 126, irregular and contracted; frequent gripings in the bowels, and spasmodic twitchings in the muscles of the chest and abdomen." p. 19.

"Mr. Robert Turner, in the early part of the morning, had another attack of epilepsy; the symptomatic fever ran high; the pulse 120; he complained of spasmodic twitchings about the chest and abdomen; palpitation of the heart; great languor, accompanied with a constant sensation of fainting; tongue white,

but not dry; occasional chills, followed by an increase of heat; headach, and vertigo. A dose of the purgative mixture was administered, and the same medicine as on the preceding day

continued." p. 19-20.

"The faces of all the four patients were swollen, with a fixed redness, more or less, under the eyes, and on the cheek bones; they had vomited two or three times in the course of the night by drinking too copiously of the diluents recommended over night, and each complained of the tongue and lips being sore and swollen.

"In the evening, the febrile symptoms had a little abated; the pain in the stomach was intense, occasionally remitting; and again returning with increased violence, with nausea and vomiting; much pain in the head; considerable thirst; and the

bowels were open in each of the patients." p. 20.

"The saline draught with manna was to be continued, and

the addition of camphor mixture."

On the 23d Mr. Gadsden received much relief from the camphire mixture, and asked for it often with eagerness; but he

had violent headach, and was much agitated.

"On the 24th, they complained of a variety of singular nervous affections; tingling and burning sensations in the hands and feet in Mr. R. Turner, beginning at the extremities of the fingers, and gradually creeping to the shoulders; sometimes one foot, and at others, both affected with a burning feel, commencing at the toes, and gradually rising above the ankle joint; palpitation of the heart; great depression of the spirits, with a perpetual sensation of swooning; and frequent twitchings of the muscles of the chest and abdomen, and of the upper and lower extremities." p. 23.

"In the evening, they were all four evidently in a state of progressive convalescence; the febrile symptoms diminished; the pulse slower, less tremulous, and contracted; more natural and open in the beat. The pulse in Mrs. R. Turner continu

ed at or about 100 for a fortnight afterwards." p. 24.

The state of Mrs. Turner naturally excited great anxiety and apprehension; but she was afterwards safely delivered of a very fine girl, who exhibited no appearance of injury from the violence of the poison. Mr. Gadsden was for a considerable time affected by epilepsy, and Mr. R. Turner had a singular sensation of numbness and prickling in the arms, accompanied by great weight for six weeks: this sensation was always removed by raising the arms.

The subject of Eliza Fenning has been so often discussed, that it will be unnecessary for us to enter upon it. Yet we can

see nothing so very extraordinary in her reluctance to take medicine, or in her expressions that "she would as soon die as live." Nor can we admit this as a confirmation of her guilt. She has expatiated her crime by an ignominious death, therefore let her soul rest in peace.

ART. 2, contains reflections on the natural and artificial

causes which contributed to the recovery of the patients.

"These cases serve to illustrate the possibility of recovery after a considerable portion of arsenic has been taken; and in Mrs. R. Turner's case, under the most unfavourable of all circumstances during utero-gestation, and at the more critical period of near seven months: and their recovery was attributed to the speedy and spontaneous operation of the arsenic, both as a powerful emetic and purgative; and no doubt, to this joint operation the patients owed their immediate chance of escape from the imminent danger that awaited them; and by plentiful dilution, the stomach was wholly relieved and cleared from the deleterious particles; and the portion which escaped into the alimentary canal must have been carried from its surface by the powerful cathartic action of the poison. The severe injury which the arsenic had effected upon the coats of the stomach, the nervous system, and the circulating fluids, could not immediately cease, although the exciting cause had been effectually and promptly removed."

Mr. Marshall, in attributing the recovery to the spontaneous operation of the arsenic, agrees with Dr. Roget in his interesting observations on poison by arsenic, contained in the Medico-Chirurgical Transactions, vol. ii. He also conceives, with reason, that the peculiarly tough and horny composition in which the arsenic was incorporated, tended greatly to blunt the acrimony of the poison. This hardness cannot be attributed to the mixture of arsenic, as it is well known this mineral does

not check the fermentative process.

Mr. Marshall considered the propriety of bleeding Mrs. R. Turner, and was prevented by the erroneous and unnecessary fear of producing too much debility. The disease induced by arsenic being administered, is admitted by all the best authors on the subject, such as Brodie, Orfila, Jaeger, Roget, Bostock, Renault, and Hill, to be of a highly sthenic nature; and can it be doubted that bleeding, under such circumstances, from a large orifice, would have accelerated her recovery, and greatly shortened the period of her convalescence? We repeat our opinion of such fears being groundless; and we cannot assent to the conclusion which he draws, that it might have done a great deal of harm. We agree most cordially in the propriety

of using purgatives and diluents; and we have seen castor oil remain on the stomach, when every thing else has been rejected. The green colour of the alvine excretions is not so uncommon as Mr. Marshall imagines; we have frequently observed them in cholera morbus in warm climates; and though this colour may be attended to, we cannot admit of its being considered as a characteristic symptom of the presence of arsenic.

The singular alteration of appearance in Mr. R. Turner is worthy of remark. The countenance was of a completely yellow cast, and his features were so much altered and contracted, that his father scarcely knew him. When he re-entered the room, from whence he had withdrawn for the purpose of vomiting, he appeared strongly to resemble an aged man; so much so, that it was like a sudden metamorphosis from youth

to age.

It is also worthy of notice, that they lost the entire skin of their tongues after they had taken the poison, and Mrs. Turner had the whole surface of the cuticle removed by degrees, in furfuraceous scales. We have frequently seen strangury induced by membraneous inflammation, therefore we cannot view this symptom as denoting the absorption of the arsenic into the circulating fluids, nor as affording any proof of its presence.

The remarks on epilepsy contain nothing new or interesting; but we may be permitted to observe, that had Mr. Gadsden been freely bled in the first instance, it is probable that the epileptic attacks to which he is still subject, might have been

prevented or greatly modified.

ART. 3, contains some interesting cases of the effects of arsenic administered as a medicine. But we apprehend that most of the ill consequences arising from its use have been occasioned by the want of attention to previous evacuation, so judiciously recommended by Dr. Kellie and Mr. Hill, and by inattention to its earliest effects. We have seen constitutions of so peculiar an idiosyncrasy, that any mineral tonic would have produced similar effects. The cautions recommended, and the mode which Mr. Marshall proposes for the administration of this active mineral, so as to restrain its deleterious effects, are highly judicious; and we will venture to predict, that if they are attended to, the patient will neither become dropsical, nor paralytic, nor epileptic, nor blind!

ART. 4, is taken up by some further observations, which merit attention; and states some successful cases of the administration of arsenic by Dr. Macqueen, of Norwich: but we must again urge the strong necessity of evacuation previous

to its use; and we concur with Mr. Marshall, that while its application is restrained within bounds, no adverse symptoms will arise, nor will the patient be endangered by the severe attacks it is capable of exhibiting.

Ant. 5, contains a strong recommendation of the carbonate of magnesia, as a remedy to counteract the deleterious effects of arsenic; but we would place much more reliance on the

methods pursued by evacuants and diluents.

ART. 6, contains a variety of analytical experiments upon arsenic. That with the polished half penny is not so incontrovertible as Mr. Marshall would have us to believe. Phosphorus and zinc would emit the same alliaceous smell,* and mercury would leave a similar silvery whiteness. The tarnishing of the knives is too ridiculous to be advanced as a proof of the presence of arsenic; as, had the dumplings been ever so pure, the same effect would have been produced on them. The following mode of reproducing the white oxide is simple and easy:

"When white arsenic is mixed with carbonaceous or unctuous matter, and then exposed to a red heat in a glass tube closed at one end, it will be sublimed in the form of shining metallic scales; and then exposed to the air, under the heat of ignition, burn with a blue flame, and revert to the common

white oxide." p. 85.

Yet we agree with our Author, that it is necessary to have

a quantity that is quite tangible.

Our Author, in his zeal for the promulgation of Mr. Hume's tests, comes boldly forward to assert that they are preferred by the first chemists of the age to all others. We can readily suppose that Mr. Marshall and his apprentices prefer them; but we imagine the first chemists of the age would be as much pleased with those of Drs. Bostock, Roget, or Jaeger. Our limits will not permit us to enter deeply into their merits, but we shall make a few extracts, by which our Readers will judge for themselves.

"A small portion, hardly perceptible to the sight, of the powdered arsenic, was placed upon a piece of glass, and on this a single drop of the ammoniaco nitrate of silver was let fall; these were permitted to remain untouched for a few minutes, when the whole became yellow, of the same hue as the usual precipitate. This appeared more obvious when the glass was held over a piece of white paper, and still more so when

it was removed and received upon the same paper.

^{*} See Jaeger's Theses, Edinburgh Medical and Surgical Journal, Vol. VII, p. 85.

"The ammoniaco nitrate of silver is fully capable of detecting even the 1000th part of a grain of the white oxide of arsenic in a state of solution; and cases, accompanied with suspicious circumstances, may possibly occur, wherein no portion of this substance could be otherwise detected." p. 94.

We had almost passed over a very delicate experiment

which we shall now transcribe.

"A weak solution of the powder was made, by boiling it in a sand bath, in the proportion of about one grain to about four ounces of distilled water. About half an ounce of this solution was put into a phial, and a glass rod, previously dipped in the ammoniaco nitrate of silver, was applied to the surface. It instantly produced a fine yellow cloud, descending in an undulating form to the bottom of the phial, and gradually converted the transparent solution to an opaque or turbid yellow colour, and a copious precipitate was thus thrown down, which in the course of a few hours turned to a dark brown. This beautiful and highly satisfactory experiment infallibly proved the powder, which had been previously so well washed, to be white arsenic.

"The ammoniaco sulphate of copper was next applied, in the same manner, to another portion of the above solution of arsenic; and this was instantly changed into a flocculent and copious precipitate, which retained its bright green colour, forming the pigment so well known as Scheele's green." p. 89.

The methods which Mr. Hume recommends for preparing the ammoniaco nitrate of silver, and the ammoniaco sulphate of copper, may be interesting to many of our Readers.

"AMMONIACO NITRATE OF SILVER.

"Dissolve a few grains, say ten, of the nitrate of silver in about nine or ten times its weight of distilled water; to this add, by a drop at a time, some liquid ammonia, till a precipitate is formed; continue cautiously to add the ammonia, now and then shaking the bottle till the precipitate shall be nearly taken up, and the solution again become transparent, or nearly so, as the ammonia need not be in great excess, if in any; for solution of ammonia being lighter than water, the superfluous portion would be likely to remain on the surface of the fluid, to which this test-liquor is to be applied." p. 99.

"AMMONIACO SULPHATE OF COPPER.

"Let a little liquid ammonia be dropped into a saturated solution of sulphate of copper, until a precipitate be formed; then continue to add the ammonia by degrees; when, presently, the precipitate will be perfectly dissolved, and the solution will become of a rich, elegant, deep blue colour, and perfectly transparent." p. 101.

ART. 7, refers to the treatment, and is merely a repetition of what has been already advanced. Our author deprecates the advice to employ emetics in cases where acrid metallic poisons have been swallowed; and has favoured us with two interesting cases, in which the highest advantage was derived from sulphate of zinc, where lead had been accidentally swallowed, and when laudanum had been used for the purpose of self-destruction.

ART. 8, contains an abstract of the symptoms, and appears

to us to be an unnecessary repetition.

ART. 9, is occupied with some experiments on human bile, for the purpose of proving that the green colour of the stools arose from a chemical change in the biliary secretion. In our experiments on bile, no change has been observed from the mixture of arsenic; and we have already stated, that we have seen the stools of the same colour when no arsenic has been used.

ART. 10, is devoted to a case of Cancer, which, it is alleged, was much benefited by the application of arsenic, in the form of an ointment. We can, however, see nothing to recommend it over many other escharotics; and when it is taken into consideration, that we have some well authenticated cases of this mineral being absorbed, and even causing death, we would caution our readers against its use.

ART. 11, contains remarks on the dangerous effects of arsenious oxide, used in the form of a lotion, which exhibit nothing new or very interesting; we certainly concur in the great dan-

ger which may arise from its use.

ART. 12, is a practical application of the chemical analysis; and contains some useful hints to guide us in our investigation,

either antecedent or posterior to dissolution.

The Appendix is the result of the Author's experiments on the decoction of onions, which he commenced in consequence of the conflicting medical evidence delivered in a recent trial at Launceston in Cornwall. The results are clear and conclusive, and we recommend them to the perusal of all who may have a desire for further information on this interesting subject.

Before we take leave of our author, we cannot but express how much we lament that he has not paid more attention to the style and composition of his book. We are not advocates for splendour of diction, brilliancy of conception," or elegance of composition, superseding the simple narration of facts; but it is

the duty of every man of a liberal education, particularly when he presents himself to the public, to write intelligibly and grammatically. Now the orthographical and grammatical errors, which appear in almost every chapter of the work before us, whether they arise from inattention or not, are disgraceful to a gentleman of a liberal profession. The Latinity of the prescriptions also, would cause a blush on the cheeks of a school-boy; and we can scarcely comprehend what is intended by "the high state of irritable excitement to which the organ of the stomach is reduced." We have no doubt our Author will receive these hints with the same good humour they are intended; and that in a subsequent edition we shall have the pleasure of observing the errors of the present volume expunged and rectified.

Practical Observations in Surgery and Morbid Anatomy; illustrated by Cases, with Dissections and Engravings. By John Howship, M.R.C.S. &c. &c. &c. Octavo pp. 494. London, 1817.

[From the London Medico-Chirurgical Journal and Review.]

WE have seen many persons who had travelled from "Dan to Beersheba"—nay, who had circumvolved the greater part of this globe, without meeting a single incident that could elicit a remark—a single object that could excite a sensation beyond what would have been felt at their own fire-sides at home. So in the medical world, we daily observe men who have been, year after year, in full practice, without encountering a disease that required the exertion of a thought, beyoud the number of draughts, or size of mixtures to be thrown in; without seeing a phænomenon beyond the pale of Cullen's descriptions; or without once dreaming that Morbid Anatomy could possibly throw a gleam of light on any tragic scene in the drama of their professional career. To render things still more easy and pleasant, they hit on a technical or artificial pathology that proves extremely useful to them on all occasions: thus, during the first years of childhood, teething is not merely the cause of every disease, but it is the disease itself, in every instance, excepting small pox, measles, and hooping cough, which cannot easily be placed to the account of dentition. In the ulterior stages of existence, coughs, rheumatisms, indigestion, and debility comprise

nearly all the ills which flesh is heir to; and the modes of treatment are varied in proportion. But there is another class of practitioners, who observe with accuracy—who reason and think on what they see; and who carefully and faithfully record the result of their observations. These are they who ultimately secure the public approbation, and the respect of the profession. It is astonishing what an advantage they possess over their indolent brethren, in every case of difficulty and uncertainty; and what resources are opened to them by the habits of reflection and study, engrafted on observation and experience!

The volume before us, evinces, in every page, the unwearied industry of its author in watching the phænomena of disease, and recording in the language of truth and simplicity their ever varying forms. Rarely indeed have we seen such an immense body of interesting facts collected into an equal space, as Mr. Howship's work presents; and he who neglects to make himself acquainted with the histories and morbid dissections here recorded, deprives himself of a fund of information which years of personal experience, even on

the most extended scale, cannot counterbalance.

Mr. Howship has not only watched the changes of disease at the bed-side of sickness, but has been permitted to avail himself of other sources of information most interesting and valuable—namely, the selection of such cases and appearances of disease, as were most to his purpose, from the extensive collection of preparations and their histories, preserved in the invaluable museum of his celebrated friend and patron Mr. Heaviside. The value of this permission has been enhanced by the unrivalled power of Mr. Howship's pencil, in delineating the difficult features of Morbid Anatomy, the importance of which is such, that, as Mr. H. justly observes, it may be compared to the Sun, which diffuses an equal and steady light over every path. The Physician or Surgeon, whose steps are not guided by this light, is liable every hour to wander in darkness and error; hence the importance of connecting the phænomena of diseases during life with the post mortem

Mr. Howship has adopted the arrangement of Sandifort in his Museum Anatomicum, which is the order followed in Mr. Heaviside's Museum; namely, according to the natural situation of parts. This work contains the detail of more than one hundred and twenty interesting cases and dissections; it consequently defies regular analysis, and permits us only to

offer samples of the materials with which so vast a magazine is stored.

Case I. [Case 5 in the work.] Anchylosis of the Jaws. The wonderful power of the constitution in compensating for natural defects, or artificial derangements, is here strikingly exemplified. Robert-Kilveroy, aged 56 years, had been totally unable to move his jaws from the age of four years! The anchylosis was brought on at that early period by violent inflammation on both sides of the face, followed by exfoliations from about the articulation of the lower jaw. He never experienced a day's sickness for fifty years, although there was no mastication of his food during all that period. In eating, be was in the habit of thrusting in his food with his fingers, by the left side of his mouth, where several of the teeth were deficient. A plate of the anchylosis is presented.

Case II. [8.] Large Ossific Tumour of the Face. (Preserved in Mr. Heaviside's Museum.) Eleanor Allway, æt. 30, was admitted into the Westminister Hospital in 1783, with a most extraordinary swelling on the right side of the face, producing great distortion, but no discolouration of the skin. The base of the tumour reached from the eye to the chin; the angle of the mouth depressed, and thrown out of its line; the nose pressed aside. The tumour projected four inches beyond the general line of the facial bones. The affection had extended across the roof of the mouth and boney palate, nearly to the opposite teeth. It was very large and fleshy. The teeth of the upper jaw, thrown out of their natural situation, formed an angle with the remaining part of the alveolar circle; and all those teeth involved in the extent of the tumour, were thus forced into the middle of the mouth, greatly impeding deglutition. This terrible disease had begun about five years before, with a small soft swelling in the right nostril; in which state it produced no uneasiness. On the presumption of its being a polypus, the tumour had been partially extracted at different times; but these operations seemed only to accelerate the progress of the disease, aggravating the degree of uneasiness and pain she now suffered, and hastening the increase of the swelling. When the complaint had become more completely formed, there were two or three teeth which, from their horizontal position, were very much in the way, and troublesome from their being loose. It was considered highly proper that these should be removed; but although this operation required no great effort, it was attended with such an hæmorrhage as brought the patient very low before it could be effectually checked.

Examination. On dissection, the tumour proved to be a large fleshy mass or excrescence, surrounding, enclosing, and extending to all the bones attached to the upper jaw, which from pressure suffered a separation at their respective points of union, with such a degree of extension and attenuation of their natural substance, that even the strongest parts of the bones were in many places reduced to the thickness of wafer paper. A beautiful engraving of the cranium and ossific tumour accompanies the description.

Case III. Malformation of the Bones of the Face.

"A lady, who had borne several healthy children, was safely delivered of an infant son; but the child was so shockingly deformed upon the face, that it was considered improper to

allow of the mother's seeing him; the infant was therefore im-

mediately taken away, and sent to nurse.

"An only son and heir to a very large fortune, the unhappy state of this child proved a source of great anxiety and

distress to the parents.

- "When the infant was about a month old, it was determined to take the opinion of one of the most eminent Surgeons in London, who was accordingly requested to go down into the country, and see the child. On examination, the deformity was found to consist in a double hare-lip, a corresponding division of the palate bones along the middle line in the roof of the mouth, together with a considerable portion of bone continued from the anterior part of the septum of the nose, and projected forward far beyond the line of the alveolar process of the superior maxillary bones. This projection of bone was covered on its superior surface with a small slip of skin, attached to the tip of the nose; which slip would have hung, pendulous, but for the projection of the jaw thrusting it upward.
- "It was recommended that the child should wait till he was three years old; at which period he was brought up to London. The extremity of the projecting part of the jaw was now considerably broad, and had three teeth growing out from it.
- "The first operation consisted in dissecting back the central slip of integument attached to the nose, and then removing the projected part of the jaw with the assistance of a fine saw, so as to allow the central slip of integument to fall into its more natural position, and to bring the external appearance of the face into the state of a double hare-lip merely. The operation succeeded extremely well, and was productive of very

little inflammation. The next year the common hare-lip operation was performed, by which one side was united with the central slip; and the following season I assisted at the remaining operation, which succeeded perfectly.

"This young gentleman has now reached the age of nineteen years. He is a very fine youth; and in company it would scarcely be observed that there ever had been any defect in

the form of his mouth.

"Not having yet reached his twentieth year, the setting in an artificial palate has been postponed; in consequence of which circumstance, his expression in speaking is still somewhat indistinct." p. 39.

This is a gratifying example of the triumph of art over the

aberrations of Nature.

In May, 1814, Mr. Howship performed an operation nearly

similar to the above, and with similar success.

After relating several interesting cases of Sanguineous Apoplexy, (none of which we shall quote, in consequence of the large space alotted to this subject in our late commentaries on Morgagni) Mr. Howship concludes, that nine cases in ten of apoplexy are occasioned by effusion of blood into or upon some part of the brain. Effusion of lympth or serous fluid upon the surface of the brain in adults is, he thinks, generally speaking, more apt to connect itself with violent headach; or, in its more advanced stages, convulsion. Where extreme severity of pain in the head has preceded an attack of paralysis, the case is more hopeless than where the palsy has come on unaccompanied with that symptom; for where no pain has been felt in the head, or only a temporary sense of giddiness, the probability is, that the paralytic affection may be the result of a mere effusion of blood upon the brain; an accident to which we occasionally find the brain able to accommodate itself, so that with the assistance of proper treatment, the functions of the nervous system are restored, and the patient, more or less, perfectly recovers. When, however, violent pains in the head have been the precursors of the attack, there is great reason to dread the existence of inflammation of the membranes of the brain connecting itself with effusion either of serum or pus, neither of which events, when dependent on an internal cause, have ever yet been proved by subsequent dissection, to be compatible with the recovery of the patient.

CASE IV. One of the most extraordinary instances of what the brain will sometimes bear in the way of injury and pres-

sure from effused blood, is said to have occurred in the late Mr. —, the most famous comedian of his day, who two years before his death had a fit of apoplexy, in consequence of which he partially lost the use of his left side, but in a few months recovered sufficiently to return to the stage, and to command the admiration of the audience to as unlimited an extent as ever. He continued performing until he suffered the second attack, which proved fatal.

"On examination of the head, the seat of the first injury was readily discovered; an apoplectic cyst was found extending the whole length of the right hemisphere of the brain, which measured in breadth nearly two inches in one direction, and one in the other. The coagulum formed by the

last attack was comparatively small." p. 66.

On Pain in the Head. This affection arises from so many causes, that it is difficult to determine, in many instances, upon what ground, as a disease, it should be taken up. Where general plethora operates as a cause, it will speak for itself; and local plethora will enable the practitioner to decide on the methodus medendi. But not unfrequently the disease hides itself, as it were, within the head, so as to become very puzzling to the physician, while at the same time it requires the greatest promptitude and decision.

Congestion in the head, with its worst effects, extravasation of blood, inflammation, and effusion, is particularly apt to arise from affections of the mind. To explain this fact, we must consider that the brain is the immediate seat of mental perception and feeling; upon which account, it is not at all surprising that it should be most quickly and powerfully subject to the influence of the depressing passions; and as these affections operate by diminishing the energy of the circulation through the whole body, it is natural to expect that the brain should be liable to suffer more immediately and severely, in these complaints, than other parts of the machine; and that this is the case, is a truth, which every day's experience tends to confirm.

CASE V. "Miss C. a single lady, of fair complexion, and tall stature, 35 years of age, always punctual and regular in her menstrual health, had for six or seven years been subject to an uneasy sense of fulness and oppression about the head, sometimes attended with pain and giddiness.

For these complaints, she was in the habit of being occasionally blooded; and for several years, had lost six or eight ounces of blood, every three, four, or six weeks, according to the severity of her headach. This treatment always procured temporary relief, but circumstances conspired to favour the continuance of the disorder. About the period of its commencement, she was said to have suffered a disappointment, in a matter which was of the highest concern to her future happiness in life; besides which misfortune, her family were more or less at variance with her, and her subsequent removal from her father's house only served to widen the breach, and increase the frequency of the fits of low spirits, to which she was now obviously falling a prey.

"At one period she was reduced to a state that was completely dropsical, from the frequency with which she insisted upon having blood taken away to relieve her head. Her limbs became swelled with anasarca. By adopting a change of measures, however, these consequences of extreme debility

were removed.

"The necessity for this frequency of bleeding, was considered the more remarkable, because her habits were known to

be constantly those of extreme temperance.

"In January, 1813, she had been very low, and had for some days, suffered greatly from the pain in her head. On the Sunday she attended church; but on returning home, said she was very ill, and wished very much to lose some blood. In retiring to her chamber, she told her waiting maid, that she had a severe pain at her heart, and about the shoulders, and that she was persuaded, from the strangeness of her sensations, she was struck with death. She lay down upon the bed, to compose herself; and her attendants were struck with astonishment and terror, on finding, soon afterwards, that she was not asleep, but dead.

"The apothecary in attendance had been with all haste sent for, but came too late. As, however, it appeared proper at least to attempt something, he opened a vein in the arm;

but no blood followed.

Examination. "Upon opening the head, all that I could observe was an excessive fulness of the vessels in general; both arteries and veins upon the pia mater; and also a certain degree of serous effusion under the tunica arachnoidea, between the convolutions of the brain. The quantity of this serous fluid was altogether, I think, about equal to an ounce.

"The whole of the brain was examined with attention, but

the structure appeared to be perfectly sound.

"In the ventricles there was no accumulation of fluid whatever.

"In the thorax the appearances were those of health; nor were there any traces of disease to be found about the viscera

of the abdomen." p. 71.

Case VI. Convulsion with extreme Debility, treated successfully by Depletion. Mrs. C. a soldier's wife, ætat. 28, small, delicate; was exposed, in the severe winter of 1808, for several days and nights, to cold and snow, with an infant at the breast. She performed a long journey, and was several times nearly overwhelmed in the snow. Previously to this she had been shipwrecked, and narrowly escaped with life. Having reached Scarborough, where her husband and family resided, her disorder seemed to be merely exhaustion. The pulse was small, low, and slow; the skin cold, and pale; tongue clean and moist; appetite trifling; headach; want of sleep. To restore the balance of the circulation, small doses of antimony were exhibited, and repose enjoined; but the latter in-

junction was not complied with.

January 14, 1809. After exhausting exertions, she fellsuddenly down, and was found insensible on the floor. She was carried to bed, where she lay tranquil, as if asleep. face was pale, sunk, and cold, with occasional tremors of the facial muscles. Evening. Still insensible; occasional contractions of the muscles of the limbs, when the pulse became sensibly harder. In half an hour after this, she revived, and complained of excessive darting pains in the head and eyeballs. Could not bear the light; roaring noise in the ears; countenance still sunk; complexion, paleness itself. About three ounces of blood were, with difficulty, abstracted from the arm; a similar quantity was obtained from the other arm. She felt materially relieved. In an hour she was seized with a rigor and shivering resembling the first stage of ague, which went off in half an hour. Head shaved and covered with a blis-Thirty drops of laudanum procured her some sleep. Next morning she was something better; purged with senna and salts. In the evening, her eyes closed on a sudden; her limbs became rigid; and she was repeatedly convulsed. The convulsion subsiding, she complained again of noise in the head, and extreme sensibility to light. The headach is not, as before the bleeding, constant, but transitory and darting. She feels more free and clear in her mind. Saline draughts, with ten drops of tincture of opium in each. 16th. Occasional tendency to delirium; in other respects better. Cont. medicament. In the evening, and at precisely the same hour as on the preceding day, she had a return of spasms, during which her eyes were fixed, and the eyelids set wide open; she was pale and insensible; but very soon recovered. A

puffy swelling of the face had come on during the day, which was very painful and tender; pediluvium. She continued to

improve, and after some trifling relapses, recovered.

Mr. Howship thinks, that the above case furnishes a strong instance of congestion of blood in the head arising principally from mental distress and corporeal sufferings. It would appear, that while the circulation within the head was suffering from oppression, every other part of the vascular system was almost literally emptied of its blood. It is remarkable, that the arteries of the brain evinced no disposition whatever to action, till they were partially emptied by venesection and other evacuations.

"Then indeed, says our author, there were pains in the head, more decided irritability about the nerves of sense, and other marks of reaction, which, in my opinion, may be much more justly considered an effort of Nature to reassume her proper functions in the economy, than as evincing any dispo-

mition to disease." p. 98.

Case VII. Slight injury of the Head producing Death forty Years afterwards. (From Mr. Heaviside's Collection.) "In 1792, I was desired to examine the head of Mrs. E—n, who had died the day before, and whom I had attended with Dr. Turton and Dr. Hawey, about eight months before her death, having made her various setons, issues, &c. by their direction. Her case and appearances were the following.

"She was about fifty, the widow of the late Bishop of D—. When about fifteen, being at play, she received a slight tap, rather than a blow, on the right side of her head. It gave her at the moment severe pain; but she disregarded it, and no immediate consequences of any kind followed more than a common headach, commencing always in the part

stricken.

"For above thirty years after, she was subject to these attacks, and then began to grow heavy, and sometimes stupid and sleepy, without any known additional cause, though she was naturally one of the liveliest and most witty women existing

This disposition continued gradually increasing till, for the last year and a half, it was very difficult to keep her awake; but when she was awake, as I have often known, though it was but for half an hour, she had all her natural brilliancy of conversation about her; then all at once would drop asleep again, not to be roused. In this way she went on, till a perpetual comatose state took place and she died convulsed.

"Latterly, her vision had become very much, although very

gradually, impaired.

Examination. "On examining the head, as soon as I had removed the scalp over the right parietal bone, I saw a portion of the bone, about the size of a crown-piece, seemingly of a very dark colour, directly under the part where the blow had been originally received, and to which spot she invariably pointed as the seat of her pain. On removing the right parietal bone, I found that part of it which appeared discoloured, was transparent, and almost wholly absorbed. It had that colour given it from the portion of the right hemisphere of the brain directly under it being perfectly black, and the colour appearing through the bone, for the dura mater at this part was altogether removed by absorption. Had she lived much longer, I am clear the bone also would have been altogether absorbed, and the brain itself protruded.

"The portion of brain under the seat of the injury was indurated and scirrhous, and this change had taken place through the whole of the middle lobus cerebri. The colour was a dark

livid hue.-

"Every other part of the cerebrum and cerebellum were perfectly sound, nor was there any disease whatever in the contents of the abdomen or thorax. Nothing but the disease above described, which had so pressed on the optic nerves at their origin as to have made them as flat as a piece of tape, and thereby occasioned her loss of sight, which amounted to almost total darkness for some time before she died.

"How far the tap of the cane, almost 40 years before, brought on this train of symptoms, it may not be easy to decide, and yet it should seem to have had a part in it, by the pain having never varied from the spot where the blow was

originally given." p. 121.

The following case ought to prove a warning to those who are in the habit of striking boys on the head with rulers, when

at school.

CASE I. A young gentleman, 12 years of age, received a rap with the edge of a flat ruler because he was dull in learning. A small wound was the consequence, which could not be healed till after a period of six years. It then closed, and he soon perceived that his eye sight was failing, to which were added epileptic fits that returned every day. In this state, he consulted Dr. Lettsom and Mr. Heaviside. The cicatrix of the old wound exhibited nothing unusual. It was proposed that a portion of the bone should be removed by the trephine, and the operation was performed. Some serous fluid and blood escaped from between the skull and dura mater. The membrane, however, had not lost its healthy colour. Next day, the pupils of the eyes recovered their natural sen-

sibility. The blindness remained absolute as before. A slow fever now supervened, and on the third day after the opera-

tion he was carried off by a severe convulsion.

Dissection. The cranium and dura mater were every where sound. Opposite the seat of the original wound, the pia mater had evidently suffered from chronic inflammation. The brain here was found indurated to a considerable degree, which induration extended itself to the whole of the middle lobe of the cerebrum, down to the basis cranii. There were

no other morbid appearances.

Case II. Habitual Eruption driven in upon the Brain. Miss C. T. a young lady aged 24, had been for several years subject to an eruptive complaint upon the face, which was frequently very troublesome. Her menstrual health was often deficient, and when this was the case, her face usually became heated and irritable; largish pimples, of a dull red colour, made their appearance, and the irritability being hardly supportable, these pimples were sometimes scratched, and would bleed.

"For so unpleasant a complaint she was naturally anxious to find a cure. It was mentioned to me repeatedly; but as it had been ascertained by experiment, that neither bark nor steel agreed with her, I advised her to bear with it, but by no means to use any local application with a view to its re-This opinion satisfied her for some time, but in June, 1813, she was prevailed upon by a female friend, to apply a lotion to her face, which certainly answered its purpose, for it cleared the face presently: but as the heat left the cheeks she began to feel uneasiness in the head; and by the time the eruption was pretty well removed from the skin, she complained of a tremendous sense of fulness and severe pain in her head; soon after which she became delirious. Bleeding, blistering, and much attention were necessary to relieve the severity of this attack, but the object which, of course was to bring back the eruption, if possible, to the face, was not accomplished in less than three months, during which period she continued to suffer from extreme headach." p. 133.

Mr. H. next relates the case of a man, in whom suppressed perspiration from the feet was followed by symptoms of ef-

fusion on the brain.

CASE III. J. P. 77 years of age, had long been subject to excessive perspiration on the lower extremities; in other respects he was well. He was advised to apply fresh dock leaves to his feet soles. He first felt a tingling sensation and irritation of the skin; in half an hour, he experienced great uneasiness and pain in the head, especially over the eyes; and

in less than an hour he was nearly blind! He was taken to St. George's Infirmary, where he remained the whole of the day and the night, labouring under intense headach and indistinctness of vision. He had no constitutional disorder. Next day the pupil became insensible to light. A blister behind each ear, and to the soles of the feet. Calomel in small doses with a view of affecting the system. As soon as the blisters became painful, the headach and blindness were relieved. The blistered surfaces were kept open; and the feet were ordered to be frequently immersed in warm water, and afterwards wrapt in flannel. Under this treatment the patient was gradually restored to health, the process being accelera-

ted by a mercurial ptyalism.

Affections of the Larynx. Of all cervical affections, those of the air tube are the most important, since fatal obstructions advance here with insidious steps at first, but rapid marches ultimately. The functions and structure of the larynx are very complicated. Every modulation of the voice is an effort of volition regulating a number of minute muscles moving the parts within the laryngeal cavity. Hence it is evident, that a very slight derangement in parts so constituted must produce much mischief. Dissection shews, that in laryngeal inflammation, it is by no means necessary that ulceration take place, or that a secretion of purulent or coagulable matter be thrown out into the cavity of the larynx, in order that suffocation may be induced. A tumid state of the parts' from ædema produced by an effusion of serous fluid into the cellular texture, is all that is frequently found post The varieties of inflammatory affection to which these parts are liable have not been accurately defined; but many valuable cases have lately been laid before the public, elucidatory of the subject. Such are the rapidity and fatality of tracheal inflammation, that any degree of dyspnæa should always excite serious apprehensions in our minds, and induce us to adopt decisive measures, before the favourable moment for preventing the complete establishment of the disease elapses. Every means of lowering the circulation should be instantly put in force, with a view to diminish, first, quantity, and then action. General and local bleeding must pave the way for blisters, diaphoretics, and antispasmodics. When dyspnæa has risen to distressing anxiety-risk of suffocation, with occasional delirium, then bronchotomy is our only resource. Mr. Howship does not think it material at what point this is performed. Spasm of the muscles of the glottis, is Mr. H. thinks, much less frequently concerned in the fatal event, than was supposed by Dr. Cullen.

INTELLIGENCE.

Domestic.

Medical Lectures.

THE lectures of the Medical Institution of Harvard University will commence, at the Medical College in Boston, on the third Wednesday in November.

Anatomy and Surgery, by Dr. WARREN.

Chemistry, by Dr. GORHAM.

Principles and Practice of Midwifery, by Dr. CHANNING.

Materia Medica, by Dr. BIGELOW.

Theory and Practice of Medicine, by Dr. JACKSON.

Dr. GORHAM is Dean of the Faculty of Medicine, for the following year.

Medical Graduates in Harvard University.

At the semi-annual public examination for the degree of Doctor in Medicine, held at Cambridge, in August, the following Candidates defended their dissertations, and received the degree of

Doctor in Medicine at the public commencement.

1. John C. Dalton, A. B. of Boston, on "Dysentery."
2. Samuel L. Dana, A. B. of Cambridge, on the "Myrica cerifera."
3. Thomas Pratt, A. B. of Chelsea, on "Amputation."
4. William Sweetser, jun. A. B. of Boston, on "Sleep."
5. John S. Hurd, A. B. of Charlestown on "Gout."
6. Chandler Robbins, jun. A. B. of Hallowell, Maine, on "Animal and Organic sensibility."

Messrs. Wells and Lilly have just published a "History and Description of an Epidemic Fever, commonly called Spotted Fever, which prevailed at Gardiner, Maine, in the Spring of 1814. By E. Hale jr. M. D. M. M. S. S.

Extra Uterine Case.

[Communicated.]

Mrs. T. M. the subject of the "Remarkable extra Uterine Case," detailed in the fourth volume of the Medical Journal, p. 801, was on the 14th day of November 1817, delivered of a full grown healthy child. Nothing remarkable occurred during her pregnancy or parturition. She recovered speedily from her confinement, and enjoys good health.

Foreign.

Injections of Cold Water, and Cold Water Half Baths, in-Hamorrhoidal Pains.

Dr. Montegre, of Paris, has drawn the attention of the Faculty to the use of cold or chilled water injections, and half baths, in those distressing hamorrhoidal pains which accompany the ejection of the fæces, where the patient is affected with piles. The following case is here given in illustration of this mode of treatment.

A man, 34 years of age, of an athletic, bilious, and sanguineous constitution, with very prominent veins, and born of hæmorrhoidinary parents, was himself subject to long and painful attacks of piles for the last five or six years. The last seizure continued three months, and be experienced no relief from any remedy, though a multitude were tried. Leeches only increased the inflammation and swelling of the tumours. Opium brought no relief. The pain was so great during each fæcal evacuation, that the patient was reduced to despair, and refused to take sustenance, lest he should add to his sufferings. In this situation he commenced the use of cold water injections and half baths, which, in a very few days so reduced the pain and external tumours, that he was able to push the latter within the sphincter ani. Five years have now elapsed without any hæmorrhoidinary attack.

TO CORRESPONDENTS.

A communication on "Icthyosis cornea" will appear when the accompanying plate is finished.

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